

## **Historic, archived document**

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DIVISION OF FORESTS  
630 Sansome Street  
San Francisco, CA 94108

A RECORD OF FOREST AND FIELD  
FIRES IN CALIFORNIA  
FROM THE DAYS OF THE EARLY EXPLORERS  
TO THE CREATION OF THE FOREST RESERVES

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This record includes the data compiled  
from newspaper files by T.C. West, and  
extracts from old boundary files, diaries  
of the early day explorers and pioneers  
and from California historical works  
compiled by me.

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L. A. Barrett

San Francisco, California

1935

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UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE



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A HISTORY OF PAST FIRES

The early fire history of this region is very obscure; it is quite certain, however, that this area has been repeatedly burned from the first habitation of man. History of other regions points conclusively to the fact that with the advent of man into an area, fire has followed in his wake. It is known that the Indian made a practice of burning the forest cover each year in order to keep the country open to travel and to make easier hunting. When the white man came he undoubtedly hastened the destruction of cover with his system of clearing land and then there followed the extensive fires set by sheepmen and Mexican herdsmen in the comparatively recent years. The last mentioned fires are remembered by some of the old residents of this locality even today.

Dane in his book "Two Years before the Mast" states that on his way to Santa Barbara in 1833 great forest fires were encountered in the Coast Range Mountains of Southern California. Other early mentions of Forest Fires are chronicled in the Hartfort "Courant" for October 7 and 25, 1839, stating that vast forest fires in the coast range of Southern California were raging. No definite locations or areas were recorded in either of the above reports.

In the year of 1872, according to old files of the Los Angeles Evening Express, fires burned in the mountains practically from June to September. The locations of these fires were always indefinite, but mention is made of the mountains of the San Fernando Range (probably Pacoima and Little Tujunga) burning for weeks at a time.

Old residents say that it was a rarity in those days for a year to go by without at least one disastrous fire occurring in the mountains. Mountain fires they called them, and the only concern they were to the valley residents then was that they made the climate unbearably hot when the north wind blew. They considered them beautiful sights to watch, in fact, early editions of the Los Angeles Evening express of the "Seventies" used to comment on the view to be obtained of an evening with the tongues of flame licking up the slopes of the Sierra Madre.

As late as 1873 there are local remembrances of the cattlemen from Texas having set the whole country afire in the Soledad Canyon, which fires spread in many places into the areas under discussion, sweeping the cover from the mountains and laying them exposed to the winter torrents. It is said that this practice continued until 1884 when we had a severe winter which caused great floods from the denuded areas and the Southern Pacific Railroad Co., lost their entire roadbed, together with all bridges, in the Soledad Canyon. After this episode burning of the mountains in that vicinity ceased for a while.

In the summer of 1873 old residents report a very disastrous forest fire occurring in this region. It was started by a Mexican herdsman of Theodore Verdugo on the Verdugo Ranch, burned over the entire San Rafael Hills, the Verdugo Hills and then spread to the Sierra Madre Range, burning continuously until extinguished by the fall rains. This fire burned the front country from La Canada to the mouth of the Big Tujunga Canyon, then over the top of Sister Elese Peak (Mt. Lukens) and into the Big Tujunga Canyon as far east as Alder Creek.

While this fire was in progress, newspaper accounts stated the City of Los Angeles was encircled with fire, that ashes fell in the streets and the sun was darkened by the pall of smoke which hung over the city. The Express of September 13, 1873, stated the Cahuenga Range (Hollywood and Los Feliz Hills) was all afire and another serious fire was burning in the San Fernando Valley near Van Nuys.

In 1880, according to the Native Sons Organ, the "Grizzly Bear" a forest fire occurred in the vicinity of the Santa Anita Rancho, and Lucky Baldwin had two hundred men fighting it. No mention was made of how it started or to the extent to which it burned.

In September 1881, the San Francisco Bulletin reported a very serious brush fire burning in the San Dimas watershed. In August 1888 the monthly weather review reported smoke from large mountain fires observed north and east of Los Angeles in the Sierra Madre Range. On October 10, 1892, the San Francisco Chronicle reported ten large fires burning in the Sierra Madre mountains, one northeast of Duarce, and the other in the mountains back of La Canada.

In the summer of 1895 a fire started in Henninger Flats presumably from brush burning and burned out the head of Eaton Canyon.

The year of 1896 was an exceedingly bad fire year, the temperature throughout the summer was high, strong winds were experienced and the year was the driest since 1876. In early September, a fire broke out in the Big Tujunga Canyon above Hoyt's Ranch, supposedly from lightning. It spread due east first, burning out portions of Clear Creek, then dropping over into the Arroyo Seco Canyon completely burning out the head of that canyon from the mouth of Park Canyon. It then spread south to Brown Mountain and from there burned out most of Millard Canyon before it was checked. Splendid work was done by the water companies in keeping the fire out of the lower Arroyo Seco. In all, this fire burned over 11,000 acres and lasted six weeks. The County Board of Supervisors furnished aid for the first time in suppressing forest fires, sending thirty-three men and provisions.

At the time this so-called Arroyo Seco fire was burning, two other fires were raging in the Sierra Madre, one in the Little Tujunga region of which little information can be secured and the other in Dalton Canyon. This last fire completely burned out Little Dalton Canyon and all of the west side of the Big Dalton and was reported on October 10 as still burning. This Dalton fire undoubtedly burned over into the head of the San Dimas and possibly into the east fork of the San Gabriel Canyon before burning itself out. Old residents of this particular region state that these fires of this period always burned themselves out as no effort was made to stop them after they reached the mountains. They state these fires were caused through carelessness in brush burning and unextinguished camp fires left by hunters. These fires occurred each year, so the residents say, and usually in September, and are stated to be extensive due to the fact that they ran into old burns and checked themselves.

In 1915, there were 28 fires with a total of only 97 acres burned, the largest fire covering 50 acres. Total cost of suppression was \$953.98.

In 1916 there were 16 fires with a total area of 685 acres burned over and a cost of \$663.46. These were caused mostly by smokers. The Sheep Creek fire of 500 acres was caused by lightning.

In 1917 there were 15 fires with a total of 802 acres burned over and a cost of \$3,897.00. Caused mostly by campers and brush burners. The Hastings Ranch fire covered 500 acres and was caused by brush burning.

In 1918 there were 18 forest fires which covered an area of 633 acres with a total cost of \$1,252.64. The largest fire was in Pacoima Canyon which covered an area of 355 acres. Caused mostly by smokers.

1919 was known as the worst fire season in the history of Southern California. Forest brush fires raged in both the Angeles and Santa Barbara National Forests. Two large fires were burning at the same time on what is now the Angeles Forest and one in what is now the San Bernardino - formerly a part of the Ingleside. The San Gabriel fire was started by John Robb, a miner who was clearing land for a garden; it started on September 12 and burned until September 27, covering an area of 30,000 acres. This fire burned over all the San Gabriel watershed east of the main river, burned over into the Dalton's out to the front north of Glendora and over into the west fork of the San Dimas Canyon. The other fire was started by an incendiary on September 15 south of Rowenna in Soledad Canyon, burned over into Pacoima and Little Tujunga completely destroying the watershed cover in those canyons and burning over a great area in the Big Tujunga Canyon; a total of 75,000 acres were burned over in this fire, 60,000 of which were in Los Angeles basin. The cost of suppression for the two fires was \$100,535.00. Very high north winds and extremely low humidity prevailed throughout the entire period of the fire. There was a total of four thousand men employed on both fires during the period from September 12 to 27. No real damaging floods were experienced during the swing seasons as the precipitation was far below normal. (441 cont'd. p. 73)

In 1920 there were 12 forest or brush fires with a total of 1,242 acres over of which only 76 acres were Government land. Total cost for suppression was \$549.75. Thirty acres of the Government land was at the San Antonio Ranger Station fire in the San Antonio Canyon.

In 1921 there was a total of 15 fires with two acres as the largest fire. Cost of suppression was \$187.86.

In 1922 there were 19 brush fires with a total of 202 acres burned over, 80 acres of which were on Mt. Gleason; this fire was caused by lightning; the others mostly by smokers.

In 1923 there were 18 fires covering an area of 1,265 acres and costing \$2,182.96. Six hundred acres of this total was in March rear Mt. Lowe and 540 acres were in Magazine Canyon.

In 1924 there were 20 fires with a total of 50,816 acres burned over and a cost of \$224,561.77. The large San Gabriel fire which was started by a smoker covered 50,000 acres in the San Gabriel Canyon, Fish Canyon, Monrovia Canyon, Devil Canyon and through Chiles to the South Fork of Little Rock Creek. It burned from the 31st day of August to the 18th day of October. It was under control twice but on account of the unfavorable conditions, the heavy north winds and the low humidity prevailing throughout, it escaped twice. While this fire only covered 50,000 acres,

Beginning with the year 1907, the name of the San Gabriel Timberland Reserve was changed to the Angeles National Forest. The Administration of this forest was given to the United States Forest Service as a Bureau, under the Department of Agriculture, as were all other forests in the United States.

From that year on up to the present date, in that portion of the Angeles National Forest within the Los Angeles Basin, records of all reportable fires have been more accurate. In 1905 there were but five small fires burning over 506 acres with a cost of \$122.00.

In 1906 there were 6 fires with an area of 2,103 acres started from an oil rig in Little Tujunga Canyon and cost the Forest only \$147.70.

In 1907 there were but six fires covering an area of 220 acres with a total cost of but \$195.00. The largest fire was 100 acres.

In 1908 there were 9 fires with a total acreage of 4,049 and a cost of \$1,266.88. Among these was the La Canada fire of 3,000 acres.

In 1909 there were 15 fires with a total area of 2,687 acres and a total cost of \$1,747.00. Most of these fires were caused from brush burning.

In 1910 there were eleven fires with a total area of only 283 acres burned over and a cost of only \$341.51. These fires were caused by brush burners.

In 1911 there were nine fires with a total area of 821 acres but with a cost of \$1,598.63. The greater number of these fires were by brush burning. A total of 296 men were employed on fire suppression during that season.

In 1912 there were ten fires with a total of 8,174 acres burned over. These fires cost \$7,215.72 for suppression. One of these fires was in Devil Canyon, a tributary of the West Fork of San Gabriel Canyon and covered an area of 5,000 acres. Nine of the fires covered a total of 174 acres and were all caused by careless campers.

In 1913 there were twelve forest fires which covered an area of 4,533 acres all caused by brush burners. The cost of the fires this year was \$4,832.64. Four thousand acres of this total was in the Sunland burn in Haynes Canyon and adjoining canyons, going over the top of Mt. Lukens. While only 4,000 acres were burned over in this fire great damage resulted from the erosion caused by the fire and flood. In the year of 1914, known as the flood year, great quantities of debris was washed down in the valley, covering the highway several feet deep with mud, rocks and sand. This highway and the school were closed for several days.

A great deal of the area now covered with residences in the town of Tujunga was built up by the flood of 1914 following the Sunland fire. Had it not been for the large quarry pit in Haynes Canyon which the Los Angeles Flood Control District converted into a debris basin the damage and loss of life would have been proportionately as great as in Montrose. 30,000 cubic yards of debris was impounded in this basin that would have otherwise gone through the town.

In 1914 there were 18 fires caused principally by smokers that covered an area of 1,734 acres with a total cost of \$5,655.54. The largest of these was in Hwy Canyon, a tributary of the San Antonio Canyon and covered an area of 1,500 acres.

After the bad fires of 1896, a storm of protest regarding the protection of the reserve was heard from all sides, especially as flood damage resulted from the winter rains of 1898 and 1899 in both the Arroyo and Dalton Canyons. The Federal Government then took steps to plan a fire fighting organization and the Department of the Interior appointed one man, E. F. Allen, as Special Agent for all the reserved in Arizona, New Mexico and California, with headquarters at Los Angeles. He was granted power to spend Federal funds for fire fighting and suppression.

During the first year of Mr. Allen's regime in 1897, no serious fires of record occurred in the San Gabriel reserve. However, in July 1898, a serious fire broke out in the head of Little Bear Canyon from a hunters camp fire; it spread into Big Bear Canyon and up the slopes of Mt. Lowe, Mt. Markham and San Gabriel Peak, burning off the whole northeast slopes of these mountains; finally stopping in the head of the West Fork of San Gabriel. It also slipped over into the head of Eaton Canyon. It consumed an area of 2,400 acres of brush and timber and burned intermittently for three weeks. The history of fire shows lack of adequate patrol, as the fire was under control on three different occasions and was lost each time when the patrol forces were pulled off the lines. There was a total of 150 men fighting this fire, many of whom were furnished by the Pacific Electric Railway Co., who had interests at Alpine Tavern on Mt. Lowe.

In October of the same year, a fire broke out on the east slope of Mt. Waterman, presumably from hunters and burned over three hundred acres, most of which was fine timber.

In 1900, a very serious fire occurred, starting from a steam well boring outfit on the Lucky Baldwin Ranch at the mouth of the Big Santa Anita Canyon. It burned out the entire Big Santa Anita except around Mt. Wilson and Sturtevant's Camp, where a determined stand was made by the Forest Service. It burned out all of the Little Santa Anita, parts of Kinney Creek, and the Summit of Mt. Harvard. It crossed the West Fork of the San Gabriel near the head and swept north to Barley and Pine Flats, going down the Big Tujunga Canyon nearly to Colby Ranch. It was known as the "Big Fire" and cost the Government \$18,000.00 to suppress, and burned 22,000 acres. A force of 150 men was employed on it for nearly three months. The weaknesses on this fire were lack of trails to get into the back country, lack of adequate manpower and transportation facilities. Many fire fighters are reported to have mutinied because of lack of food at the camps and water on the fire lines.

The year of 1901 was a light one, only one fire occurring of any size, which was in Barrett's Canyon, a tributary of the San Antonio Canyon. This burned one hundred and sixty acres of timber land and was started by an unextinguished hunter's fire. The guilty party was apprehended and a conviction was secured.

In 1902 no serious fires occurred through the year.

In 1903 an incendiary fire was started in Prairie Fork of the San Gabriel River and two thousand acres, two-thirds of which were fine timber, was destroyed. This fire was attributed to sheepmen and the motive for firing was for better grazing. The guilty parties were not caught. Six other fires occurred this year, but the acreages inside the forest reserve were small, totaling 240 acres for all six.

1904 saw no large fires occurring in this region. There was a total of nine fires burning over an area of 176 acres, which cost the Government only \$127.00 to suppress.

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
CALIFORNIA REGION



ADDRESS REPLY TO  
REGIONAL FORESTER  
AND REFER TO

PHELAN BUILDING  
55 SECOND STREET  
SAN FRANCISCO, CALIFORNIA

PR  
Fire  
Historical

October 14, 1935

Regional Forester,

San Francisco, Calif.

Dear Show:

I am attaching hereto the original copy of the very informal bulletin that I have compiled dealing with early day fires in California, their origin, where located and by whom reported.

I don't claim that this covers all of the available information on the subject - there is much more - but it does assemble in one place everything available in this office, plus what I dug out of many early-day diaries, historical works, magazines and newspapers.

I believe that there is enough here to convince any reader on these points:

1. That the Indians never set as many fires as the old-timers would make one believe.

2. That fires increased many fold with the advent of the gold seekers and the clearing of the country.

3. That between 1870 and 1905 the sheepmen were responsible for more fires than any other half dozen agencies combined.

4. That before the creation of the Forest Reserves destructive fires were much more numerous than they have since been.

5. That the greatest objection to the creation of the Forest Reserves came from the stockmen and particularly the sheepmen.

It was only possible to type a few copies at this time. These are numbered - No. 1 goes to the Region 5 Library; No. 2 to the Forester's Library; No. 3 to the Region 5 office of Fire Control; No. 4 to the California Forest Experiment Station and No. 5 I have retained.

If more copies are desired it will be up to some other office to make them.

It is possible that this compilation may be of considerable use as time goes on in refuting the "old timer" fire theories.

Very sincerely yours,



Assistant Regional Forester

Enclosure

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A RECORD OF FOREST AND FIELD FIRES  
IN CALIFORNIA  
FROM THE DAYS OF THE EARLY EXPLORERS  
TO THE CREATION OF THE FOREST RESERVES

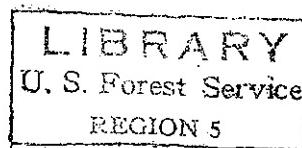
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This record includes the data compiled from newspaper files by T. C. West, and extracts from old boundary files, diaries of the early day explorers and pioneers and from California historical works compiled by me.

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L. A. Barrett  
San Francisco, California

1935



## Fire Laws and Ordinances

### The World's First Forest Fire Law

"If fire break out, and catch in thorns, so that the stack of corn, or the standing corn, or the field be consumed therewith; he that kindled the fire shall surely make restitution." (Exodus 22:6)

### 1793 - First California Fire Prevention Order

"The first legislation against forest fires in California was in the form of a proclamation issued by Governor Jose Joaquin Arrillaga, under date of May 31, 1793, from Santa Barbara. It was enclosed in a letter which he sent Father Presidente Lasuen, who was stationed at Mission San Carlos, and as the successor of Father Junipero Serra was the head of the California Missions.

"It appears that in the early days Indians, Christians and Gentiles had been careless in starting fires. Part of Governor Arrillaga's letter to Father Lasuen is as follows:

"About the serious damages that result from fires which every year the Indians, Christians and Gentiles start in the fields, etc., I have taken steps to publish the following proclamation. I forward it to your reverence with the petition and request that you be pleased to make it known to all the Reverend Missionaries, in order that on their part they contribute to this just measure, and that they threaten the Christian Indians with rigors of justice in case fires are started, etc."

"According to Father Englehardt's history, Father Lasuen accordingly sent a circular to all the missionaries with instructions to publish the proclamation, to place a copy in the archives, and to republish it annually.

"This proclamation is said by Father Englehardt to have been published or read each year by the missionaries up to 1804, the year that Governor Jose Joaquin Arrillaga died.

"No penalties were fixed in the proclamation, but punishment was threatened for violation of the executive order." ---- Santa Barbara Morning Press

1872 - First California State Fire Law

"AN ACT to prevent the Destruction of Forests by Fire  
on Public Lands, (Approved February 13, 1872.)

"Section 1. Any person or persons who shall wilfully and deliberately set fire to any wooded country or forest belonging to this State, or the United States, within this State, or to any place from which fire shall be communicated to any such wooded country or forest, and shall not extinguish the same, or use every effort to that end, or who shall build any fire, for lawful purpose or otherwise, in or near any such wooded country or forest, and through carelessness or neglect shall permit such fire to extend to and burn through such wooded country or forest, shall be deemed guilty of a misdemeanor, and on conviction before a court of competent jurisdiction, shall be punishable by fine not exceeding one thousand dollars, or imprisonment not exceeding one year, or by both such fine and imprisonment; provided, that nothing herein contained shall apply to any person who in good faith shall set a back fire to prevent the extension of a fire already burning. All fines collected under this act shall be paid into the county treasury for the benefit of the common school fund of the county in which they are collected."

1874 - From Yreka Journal - Yreka, July 29, 1874

"Forest Fires.-- At this season of the year, it is usual to see our forests in some section on fire, and to guard against it, Sheriff Riley, has offered a reward of \$100 for knowledge of any parties guilty of such an act as setting fire to the woods, or carelessly allowing such fires to result from camp fires.

1884 - San Diego County Ordinance

One of the oldest fire prevention laws of California on record is Ordinance No. 5 passed by the Board of Supervisors, San Diego County, April 17, 1884. The ordinance provided that a reward of \$100 would be paid "for the arrest and conviction of every person who, upon departing from camp wilfully or negligently sets on fire, or causes or procures to be set on fire, any woods, prairies, grasses or grain on any lands in this county; the reward to be paid the person or persons making the arrest, or if the arrest is made on a warrant, to the person or persons who made the complaint".

Evidently careless campers were the most serious fire hazard in those times and in that region as no other class is mentioned.

## 1902 - What Miners Thought of Burning Forests

The following is a part of the report of the Committee on Resolutions adopted at the annual convention of the California Miners Association in November 19, 1902:

"Whereas, it is well known that the annual fires in the Forests do more injury than all the other destructive agencies combined:

"Whereas, this injury can be prevented by an efficient forest patrol; now therefore:

"Resolved: That this Association hereby instructs its Committee on Legislation to formulate a proper bill, and urge its passage through the Legislature, to appropriate such sum of money as it may think necessary for the purpose of paying the expense of a fire patrol to be placed under the control of the University of California."

## What Fires Have Done to California

The claim that the "old timers" knew how to handle fire is not borne out by what the Bible says about fires that ruined the country, destroying the beasts of the field and the birds of the air. Our Pilgrim Fathers had fire laws. So did the Spanish Governors of California. Napoleon had drastic fire laws in effect in France during his regime.

Periodically, the forest protection policy of the United States Forest Service, which seeks (1) to prevent fires from starting, and (2) to suppress quickly those that may start, is attacked by people who hold that the deliberate and repeated burning of forest lands offers the best method of protecting these lands from the devastation of summer fires. The "light burning" advocates base their contentions on the false premises that fire prevention is in the long run an impossibility, that controlled burning does protect the merchantable stands of timber, and that this can be done at a lower cost than by fire prevention methods. But they present no facts to prove the correctness of their theory.

It is stated that in the early days of Indian fires there were no great conflagrations; that the forests were open and free from brush, and that the forests withstood repeated burning without serious injury.

The records prove all those statements to be incorrect. The forests of California that were swept by early day fires now support only 1/3 to 1/2 the amount of timber per acre as compared

to the stands growing on land which escaped fire. In other words, periodic burning has reduced our forest capital more than 50 per cent, and has also turned millions of acres of valuable timber bearing land into brush wastes. On the 6,000,000 acres of forest land burned by early day fires, the loss from fire, insects and other results of burning is conservatively estimated at three billion dollars.

Great conflagrations occurred in California during the early days. Records from both the northern and southern part of the state prove that these fires often burned from four to six months and frequently swept over more than 100,000 acres of forest and major watersheds before being extinguished by rain. No such conflagrations as these have destroyed the timber wealth of the state since fire prevention measures have been put into effect by the Forest Service. Writings of pioneer explorers and Government surveyors also disprove the statement that the early day forests were open and free of brush. In fact, the records prove that brush was everywhere found, as today.

The "light burning" advocates further state that periodic fires improve grazing conditions, kill the "wood-beetles" and make hunting easier. While these are largely selfish contentions with little thought to the welfare of the forest, they, too, can be proved incorrect.

Periodic burning does at first increase the stand of forage plants, but extensive experiments have shown that if this practice is continued, the noxious weeds and shrubs, which are more hardy than the forage plants, will soon take possession of the range and turn it into a weed and brush patch. Repeated fires eventually destroy or seriously reduce the productivity of valuable range lands, as is well illustrated by the hundreds of thousands of acres of worthless brush range along the borders of the great interior valleys.

Entomologists have proved that pine beetles and other destructive forest insects, which live in green not dead trees, are increasingly attracted to burned areas and readily attack and destroy trees weakened by repeated fires. Experiments have shown that the volume of merchantable timber destroyed on a burned area by insect attack increases 250 per cent the first season following a fire. Also, that the "wood beetles" of which the "old timers" talk so much, are in reality not destructive to green timber at all, but live entirely in dead and fallen trees and logs.

Light fires, even if it were possible to properly control them, cause serious damage to the most valuable veterans of the stand by burning them at the base and causing cat-faces - a loss that amounts to several dollars per acre in merchantable timber every time a fire runs through the forest. In addition, all the

little trees and saplings, which are the basis of the next timber crop, are killed outright. No more effective method of sure and total forest destruction could be devised. "Light burning" causes the same sort of forest destruction it is claimed to prevent, and the most beneficial species of brush succumb first to the effect of repeated fires.

Another serious result of the repeated burning of forests is that the gradual destruction of the tree cover and the burning of the humus and top soil leads to the invasion of the land by worthless brush which makes the reestablishment of the forest more difficult. Furthermore, the brush is never entirely consumed by these fires, and each light burn makes more fuel for a later and more destructive fire. Over two million acres of brush fields in the timbered regions of California today bear mute witness of the destructive effects of the repeated burnings of the forest.

"Light burning", contrary to the belief of its advocates, is not an easy practice either in the spring or fall, as extensive field experiments have proved, nor can it be carried on without damage to the forest. In rough mountainous country, such as makes up the greater part of our forested area, it is practically impossible to get the fires to "run" lightly over any large area, or to control them after they are once started.

Brush in the forest undoubtedly makes game difficult to hunt. If game seeks the brush, that is evidence that the brush is attractive to it, just as is the forest. Destroy the brush and forest and you destroy the home and breeding place of wild life, as well as countless thousands of game birds and animals. Even with present forest protection methods the yearly toll of wild life taken by fire is enormous. What must it have been in the days when fires were looked upon with indifference or as a necessary evil?

#### Fires in the Pine Forests

That fires started by lightning, or otherwise, in the pine forest of Northern California as early as the year 1454 is a fact now established beyond a question of doubt. Between 1454 when the earliest fire of which living pine trees gave authentic record, and the year 1700 - a period of 346 years, the evidence is meager and rather hard to find due to trees of that age being scarce. However, a sufficient number bearing the unmistakable evidence that fires devastated the forest at frequent intervals during that period, were found. The living record of conflagrations occurring during the past 230 years, or since 1700, is both complete and intensely interesting. By cutting down trees in lumbering operations and counting back on the annual rings (each one of which represents one year's growth), and recording the occurrence of fire scars, it is established that

particularly severe fires occurred during the years 1702, 1708, 1720, 1726, 1735, 1747, 1750, 1760, 1767, 1776, 1783, 1785, 1795, 1796, 1797, 1800, 1804, 1807, 1814, 1822, 1828, 1829, 1830, 1831, 1837, 1842, 1843, 1851, 1857, 1865, 1870, 1878, 1880, 1889, 1890 and 1899. Many other fires occurred - in fact, fires occurred practically every year from 1700 to 1900 according to evidence found on living trees, but the years listed witnessed fires which covered big areas and which burned with unusual severity.

A most interesting and remarkable fact brought to light by this investigation conducted by Dr. E. P. Meinecke of the Office of Forest Pathology, Bureau of Plant Industry, was that the occurrence of these individual fires was simultaneous over a large area aggregating six million acres in the central Sierra. The fact that during the past 80 years the bad fire years - as they might be termed - have coincided with those seasons during which precipitation was subnormal and dry lightning storms were prevalent, undoubtedly accounts for the simultaneous fire outbreaks of the previous centuries.

#### California's Forest Areas Decreasing in Size

In the Days of '49, when the mud flats of San Francisco Bay extended to Montgomery Street and Los Angeles was a pueblo, the pine forests of the Sierra Nevada and the Douglas fir forests of the Coast Range clothed the mountains and foothills in a much wider belt than they do today, according to a report of 1934 by A. E. Wieslander of the California Forest Experiment Station of the U. S. Forest Service. Logging, grazing and particularly forest fires are the chief factors which have converted the old commercial forests to what are now comparatively worthless land and have created a land management problem of large proportions in California.

In Eldorado County alone, according to Wieslander, the ponderosa pine forests have retreated 10 miles up the mountain slopes from an elevation of 1,000 feet to the 2,500 foot contour on a 30 mile front, leaving a strip of 162,000 acres entirely deforested and an even larger area thinly stocked with second growth trees. This land, which is capable of producing a forest stand of 37,000 board feet of lumber per acre, more than is usually found today on the average commercial logging areas, is now mostly covered with half scrub woodland, worthless for timber and too dense or too brushy for good grazing.

Isolated survivors of the original forest, scattered groups of second growth and such names as Sawmill Flat, Sawmill Creek and Shingle Springs, occurring in what are now treeless areas, indicate that they were once in forested territory. This

theory is confirmed by old records which prove that from 1850 to 1870 many sawmills supplied lumber to the placer mines in the central Sierra region.

#### What Fire Does to the Redwoods

Scientists from the University of California Division (School) of Forestry report that the cause of heart rot of redwood known to lumbermen for many years has been found. The name of the disease is Porea Sequoia. It is a fungus disease and in almost 100% of the cases it enters wounds caused by fires. After gaining entrance to the tree it sends out tiny mycelium which thread their way through the wood cells up the heart of the tree. This causes decayed spots surrounded by a thick brownish layer of discolored heartwood. The disease is present in the brownish dark colored redwood and continues to grow under favorable conditions. Under favorable circumstances it may continue even after the trees have been made into lumber. It has caused an annual loss to lumbermen of 15%.

A sure prevention of this loss is efficient fire control.

A 60 year old stand of redwood was recently cut and each tree carefully checked by research men. Every tree that had been damaged by fire was found to be infected with this disease. The disease was not present in any tree which had not been damaged by fire. Thus a timber owner may be growing a stand once burned by fire to merchantable age of around 60 years only to find that many of his trees are worthless because of this heart rot or butt rot, as it is sometimes known.

From stump scars, Professor Fritz of U. C. School of Forestry was able to trace back the fire record for 1500 years. During the last 1100 years there have been about 45 fires, an average of approximately 4 fires a century. Compared with the pine region, this record appears mild, nevertheless the burnings have done a large amount of damage. Lightning storms have been rare, only two trees with lightning scars having been found by Fritz within the large aggregate areas observed by him during the entire period of the studies.

Some old residents of the region believe the Indians set fires to make travel easier and others think their objective was to burn out their enemies. Whatever the reason, it is almost certain that the fires were all man caused.

Burned-out butts, commonly called "goose-pens", are one result of these past fires. Not only has a large volume of valuable lumber been directly destroyed in this manner, but the weakening effect causes many trees to topple over. Ninety per cent of all dry rot in the lower trunks is chargeable to exposure of heartwood by fires and the rot in turn, by weakening the bole, lowers the resistance to the shock of falling, resulting in excessive breakage. The heat of severe fires causes a profusion of adventitious buds to form and sprout, these sprouts often extending the entire length of the tree. Their effect is to lower the quality of the lumber produced.

Another very serious result is the destruction of the top soil. Redwood lands are particularly liable to undergo excessive erosion when not protected by vegetation and duff. The peculiar rooting habit of redwood also demands that top soil be kept intact and in a natural condition for best growth.

It was estimated that, on the average, each fire in virgin timber has caused 2% of the trees over four feet in diameter to fall. There would probably now be 15% more lumber, of better quality, if fire had been excluded.

In connection with present logging operations, there are two fires on every area exploited - one before cutting and one after log making and barking. These kill every seedling and most of the small trees left by the fallers. Usually a good reserve stand is left but logging and fire wipes it out.

Clean-up fires to clear the ground for donkey skidding result in 20% damage to peeled logs. Fritz estimates that these fires cost about \$2.00 per M feet log scale.

#### Indian Fires

According to ethnologists who have studied the Indians of California, most of the Indians along the western slope of the Sierra lived in the valleys or the foothills and very few lived above the oak belt or above the salmon runs. The limited territory occupied by them within the yellow pine belt has in most cases been deforested and is now brush land or second growth timber which has come back in the last 60 or 70 years. If they did light-burn the territory occupied by them, their methods either destroyed the timber, or the miner and stockman destroyed it when they came. There were no villages along the western slopes of the Sierra where our mature timber now stands.

In writing about the Indians as he found them, Fremont said:

"The condition of the Indians is nearly skin to that of the lower animals. Here they are really wild men. In his

wild state the Indian lives to get food. This is his business. I found him in the most elementary form, the men living alone, the women living alone - but all after food, and the same in the mountains and prairies where the wild Indians were found in their highest condition where they had horses and lived in lodges. The labor of their lives was to get something to eat. The occupation of the women was in gleaning from the earth everything of vegetable or insect life - the occupation of every man was to kill every animal they could for food."

From this statement, it seems very unlikely that our Indians had the time or the inclination to go into the forests and light-burn them as some claim they did before the whites came.

According to ethnologists, the Indians of California lived on fish, birds, grasshoppers, locusts, acorns, seeds, roots, rabbits, squirrels and deer meat. They obtained their food in the easiest possible way. Birds, fish, rabbits, etc. were caught in nets. Most of the deer were trapped or snared, but many were killed with the bow and arrow. Snaring and trapping deer could be accomplished only when timber, brush and undergrowth forced the deer to travel well-defined trails. In hunting deer with the bow and arrow the Indian usually disguised himself with a deer's head and resorted to stalking to approach near enough to the animal for his arrow to be effective. The bow and arrow used by the Indians were effective in deer hunting up to 50 or 60 yards only. Since brush and undergrowth was so necessary to the Indian in trapping and shooting game, he surely would not destroy it with fire to improve hunting conditions, as it is frequently said he did.

Ethnologists report that the Indians of California did not live and work together as tribes but lived apart in villages which frequently consisted of a family, and that they lacked leadership and did not unite or cooperate in their warfare or in any of their activities, but really lacked the sense of cooperation. In view of this it seems very improbable that they would go into the mountains at the exact time to burn without damaging the forest, and in such numbers as to burn the timbered lands each fall, as they are credited by some with having done. Setting fire required time, as the use of the torch was known to only one tribe in California, and all fires were started with the drill and powdered bark and leaves.

No doubt fire was used in a defensive way against invasions, particularly in the valleys, but practically no warfare existed prior to the coming of the Spanish.

Brush was also removed from around villages to prevent dangerous animals and enemies from coming too close without being observed. No doubt some of their fires escaped.

The fire drill of practically all California tribes consisted of a flattish hearth with cups near the edge and guide notches for the carbonized wood powder running out from the pits. The drill was made of buckeye, or a similar wood; about a foot and a half in length and less than a half inch in diameter. Dry grass was used as tinder. Only one tribe, the Modocs, used torches.

#### Opposition to Forest Reserves

The early day boundary files, newspaper items from the days when the Forest Reserves were in the making, and my own observations conclusively show that the greatest opposition to the creation of the Forest Reserves came from stockmen who used the mountain ranges, and that this opposition was particularly strong from the sheepmen. A principal reason for this opposition is not hard to find.

From the days when stock was first taken into the mountains until the creation of the Forest Reserves, it was the common custom of stockmen to fire the mountains as their stock was driven out in the fall. Sheepmen were by far the worst offenders. This burning was not done with any view to improving the forest, but from the mistaken idea that it was improving the range. In those days it was often possible to count over 100 fires from one high point and the sky would be so full of smoke that the sun was obscured.

Evidence of these old stockmen fires shows up on the older timber everywhere through the mountains of California.

#### Sheepmen Fires - by T. C. West

Sheep were brought into California by the Spanish in 1773. By 1800 the mission books accounted for 88,000 sheep in the State. This number grew rapidly until in 1834 there were in excess of 300,000 sheep and goats under control of the missions. After the secularization of the missions the number steadily diminished until in 1842 there were only about 30,000 sheep and goats in California. After the American occupation numbers grew rapidly and in 1852 the assessors data reported 82,867 sheep. Eight years later (1860) this number had increased to 1,088,000, by 1870 there were 2,768,000 and in 1880 there were 5,727,000 sheep in California exclusive of lambs.

In 1860 the sheep population was concentrated largely in the south coast counties, the Sacramento Valley and Southern California. The San Joaquin valley claimed less than 10 per cent of the total number while the number in the mountain counties was negligible. Shifts were pronounced during the next few years and in 1870 52% were concentrated in the Sacramento Valley and San Joaquin Valley, each valley having about the same number. By 1880 the San Joaquin

Valley was credited with 29 $\frac{1}{4}$  percent and the Sacramento Valley with 21 $\frac{1}{4}$  percent of the total sheep population of the State.

The San Joaquin Valley continued to gain and in 1890 34 $\frac{1}{4}$  percent of the sheep of the State (3,373,000) were reported to be there but this decreased to 31 $\frac{1}{4}$  percent in 1900. Sacramento Valley had in the meantime increased to 25 $\frac{1}{4}$  percent of the total in 1890 and 29 $\frac{1}{4}$  percent of the total in 1900.

When range stock were first brought to California there was an abundance of feed which caused the stock to flourish and to increase rapidly. The great influx of people to the State, many of whom, being attracted by the rich soil and excellent climate, engaged in farming, soon had its effect on the open ranges. The use of much of the best grazing land for agricultural crops together with the rapid increase in range stock, created such competition for range that stockmen were forced to look to the unsettled areas for feed for their herds. Added to this reduction in range drought periods in the late 60s and 70s caused further shortage of feed and in many instances caused a shortage of water for stock.

From 1868 to 1877 six seasons ranged from 90% to 45% of normal in precipitation. 1876-77 was 45% of normal.

In the late 60s and early 70s stockmen began taking sheep and cattle to the most accessible ranges on the higher mountains for summer pasturage. In 1877, 1878 and 1879 the shortage of feed and water in the valleys and foothills forced stockmen to take their herds into the higher mountains in large numbers and practically the entire mountain range was stocked heavily during that period. During the 80s sheep were driven to the mountains by the hundreds of thousands and the policy of feed at any cost was well established.

When the sheepmen took their flocks to the mountain areas in such large numbers the ranges adjacent to roads and trails were occupied or fed out by the early arrival and those who came later had to take their flocks to less accessible ranges over routes traveled little if ever by such bands. Heavily timbered areas with down timber and brush areas were encountered and had to be traversed with much difficulty, loss of time and in some instances probably loss of stock. Such obstructions were considered as barriers to be removed with as little effort as possible.

The drive to the mountain ranges was made as early in the season as possible, in fact there were seasons when late snows caused heavy losses in herds of sheep owned by men too anxious to reach the range first. The timbers and brush covered areas were as a general rule too damp to burn well at that season, consequently

only occasional attempts were made to clear routes by burning while the sheep were enroute to the range. Furthermore there was, if burning conditions were good, danger to their own flocks to consider. Many fires were started by the sheepmen enroute to the range however through carelessness with camp fires, etc.

When summer was drawing to a close cheap stubble was available in the agricultural areas and many sheep were removed from the higher ranges to finish the season where lambs could be marketed and fall shearing could be done near transportation. It was at that time that fires were set to remove brush and timber from driveways to open up new range and with the erroneous idea of increasing the forage the following year.

Such fires frequently burned until extinguished by rain or snow as no one had sufficient interest in the timbered areas nor the means to extinguish them. If private property was endangered back fires were set but a fire once started was seldom controlled through the act of man. The practice of burning continued until the National Forests were established and control was established or until the timbered land became the property of lumbermen and they took control of the situation.

While no records were kept of fires or their cause prior to the establishment of the National Forests it is well established, through newspaper items, which commented only on unusually large fires, by statements of mountaineers familiar with conditions and occurrences of that time and by writers who at that time realized the damage being done, that the largest percentage of the most destructive fires in the mountains of California were caused by sheepmen during the thirty years preceding the establishment of the National Forests.

It is true fires started from other causes but no other class of people left so many camp fires burning in such dangerous places to spread and no other class so systematically burned to remove "brush" and timber from the mountains. Brush to the sheepman meant anything from manzanita to sugar pine trees 20 years of age.

General Information on Cover Conditions and Fire  
Damage From 1774 to 1904

1774 to 1776 - DeAnza Expedition

In reading thru the record of Anza's California expeditions I nowhere find a reference that the Indians were in the habit of burning the country.

Although most of Anza's travels were in the fall, winter and spring when the country was wet and green, he and those with him kept such detailed diaries that it is not believed that they would overlook mentioning such an important item as large areas of fire scarred country did such conditions exist.

Father Fray Pedro Font kept a particularly interesting diary and apparently overlooked little in describing the topography, cover and inhabitants of that portion of California from Yuma to San Francisco Bay and vicinity. I quote a few of his observations that show what the cover was in those days and the very brief mention he makes of fires:

On the night of December 27, 1775, the expedition camped at the head of Bautista Canyon on what is now part of the San Bernardino National Forest. Describing the country Font says this valley is "formed on the right by the Sierra Nevada (Thomas Mountain) which I have mentioned, with others, and on the left by another spur of mountains, very high and full of pines, which appears to run toward San Diego." Undoubtedly this latter mountain is Coahuila Mountain (elevation 5635') and nearly all of the pines that were there in 1775 have been killed by the fires that have swept over that region since the white man came.

Sunday, December 31, 1775, the expedition crossed the Santa Ana River not far from where Riverside now stands. Font says, "The Santa Ana River is a stream with plentiful water and a very deep channel, being only some four or five varas wide, six at the most, in all this vicinity, but it is so deep that it has very few and difficult fords because of the rapidity with which the water runs. The waters of the river are very crystalline and beautiful." This does not indicate that the mountain region from which that water came was burned off periodically. During the nearly 50 years that I have known this stream the water has never been crystalline and beautiful in the valley.

On Monday, January 8, 1776, they passed what was then called Arroyo de Santa Maria Madelena, or La Quema. This place was between where the settlements of Olive and El Toro (Orange County) are now located. Font says, "It is also called La Quema, because of a somewhat dangerous fire that occurred in the grass patches, caused in part by the heathen. (Indians)" This is one of the two only

references to grass, brush or forest fires in the Anza records, and in this case he indicates that the fire was not entirely the work of the Indians.

Tuesday, January 16, 1776, part of the expedition was at Mission San Diego endeavoring to round up the leaders of the Indians that had sacked the mission shortly before. Parties of soldiers were sent into the back country to look for the Indians. Font remained at the Presidio of San Diego. He writes, "This afternoon it was noted from the top of the hill of this presidio that in the Sierra many smokes were being sent up, a method by which the Indians communicate with each other when they have news."

Since the California Indians used signal smokes for purposes of communication, it is very possible that an occasional signal fire may have been the cause of burning a considerable area of grass, brush or timber.

Another possible cause of large fires was cited by Font on January 20, 1776, while he was still around San Diego:

"In the afternoon I saw a vivid illustration of the burning of the Mission San Diego. By accident fire was set to a fair-sized tule hut which served as a forge, and it was not possible to put it out, try as hard as they might, although all of the people rushed to the spot; and then I realized, as I had already known, how dangerous are buildings of tule or grass and logs."

Monday, March 4, 1776, the expedition crossed the Cuesta Pass, past Santa Margarita and Atascadero to La Assumption where camp was made. Font describes the topography and cover of the country thru which they passed, and then says of the country to the west: "High up in the Sierras are seen large number of spruce and other trees." The Sierras are still there but the trees are few and far between today.

April 4, 1776 the expedition was floundering around in the marshes in the vicinity of the Antioch bridge. Font writes:

"And so we traveled more than three leagues, which in general may be estimated as to the Southeast, going with some difficulty in the midst of the tulares, which for a good stretch were dry, soft, mellow ground, covered with dry slime and with a dust which the wind raised from the ashes of the burned tule, so biting that it made our eyes smart severely and caused tears to flow so that we could hardly see."

Since this trip was thru a region unknown to white men it is very probable that the tules were burned by the Indians for some reason.

In crossing over the Mt. Hamilton range from the Arroyo Mocho to the Arroyo del Coyote on April 5, 17776, Font says:

"On reaching the top of the pass which it formed we were confronted by extended and very rough mountains ahead of us, all the country that we had traversed and all that was seen on both sides being thickly grown with oaks, pine and brush."  
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He further says,

"Although seen from the outside this range appears to be bare on all sides and without trees, yet in the center it is very tangled and full of brush, pines, live oaks, oaks, spruce and other trees."

This description very well fits the Mt. Hamilton range today; so apparently it was not kept burned over by the Indians when they were the only inhabitants.

#### 1826 - What Has Become of the Timber?

In his diary of August 29, 1826, written at the San Gabriel Mission by Jedediah S. Smith, California explorer and trapper, the Mission location is described as follows:

"The situation is very handsome, pretty streams of water running through from all quarters, some thousands of acres of rich and fertile lands as level as a die in view, and a part under cultivation; surrounded on the north by a high and lofty mountain handsomely timbered with pine and cedar, and on the south with low mountains covered with grass. This Mission has upwards of 30,000 head of cattle, and horses, sheep, hogs, etc. in proportion."

#### 1828 - Where Were the Open Forests?

"Old timers" in Northern California who claim there was no brush on the Mountains until the practice of woods burning by the Indians was stopped, will not get much comfort from a perusal of the diary of the travels of Jedediah S. Smith through that region over a century ago.

Writing from a point near the junction of the South Fork and main Trinity rivers under date of May 10, 1828 the diary says,

"The traveling was very bad, several very steep, rocky and brushy points of mountains to go up and down with our horses, .... we lost 15 on the way in the brush - 2 with loads."

By Wednesday, May 14th, the party was down in what is now the Hoopa Indian Reservation. The diary says,

"The traveling amazingly bad; we descended one point of brushy and rocky mountain, where it took us about 6 hours to get the horses down."

For several days after this the party endeavored to cut across to the coast "but found their way impassable by reason of dense forests and underbrush and steep mountains", so finally wound up by following down the Trinity and Klamath to the sea, traveling mostly by canoe.

#### 1848 - Fremont's Notes on California

In his geographical memoirs on Upper California, 1848, General Fremont goes into detail as to topography, cover and climatic conditions of the portions of California covered in his travels. But nowhere in these detailed memoirs is there reference to grass, brush or timber fires or to passing through burned areas.

These memoirs covered the Sacramento and San Joaquin Valleys from Mt. Shasta to Tulare Lake, and the coast country from San Francisco Bay to San Diego. If Indian fires were so prevalent in those days as we are led to believe, it hardly seems reasonable that so painstaking a man as Fremont would fail to record them. He does mention the manzanita and snowbrush in the timber country at the upper end of the Sacramento Valley; the wooded plain at the foot of the San Gabriel Range; and the pine timber on the Santa Lucia and Santa Ynez Ranges. Everywhere is mention of the wonderful forage stands and of the herds of game, especially deer, antelope and elk.

#### 1852 in the Siskiyou Country

In looking over my old diaries, I ran across some notes of a talk given at a Ranger meeting in Mt. Shasta on March 24, 1911, by an old gentleman, named W. W. Taylor, of McDoel, California. Mr. Taylor said that he had lived in the Mt. Shasta region since 1852, and had been among the Indians all of these years. He said that game was plentiful in the early days and that he never knew the Indians to fire the country, because they could get game without

fires. Mr. Taylor said fires had constantly increased as the country had been settled up by white men. He expressed the opinion that brush could not be burned off without also burning the timber reproduction on which the forests of the future depended.

#### 1852 - Information Obtained From An Early Day Settler at Sonora

I do not recollect ever having heard the Indians accused of setting fires to the timber or wood. My father told me that he never heard of the Indians doing any harm. All the Indians I have known were not ambitious - they were absolutely lacking in the ability or sense of cooperation, very lazy and had no sense of improving themselves or conditions. The Indians were not inclined to travel far from where they were born and raised, in fact the Indians I first knew as a young girl (since 1852) lived their entire lives and died close to if not in the village in which they were born. My father acted as advisor for the Indians, acted as their attorney when in trouble and consequently they were friendly toward our family and we probably knew them and their customs better than most people. When the Indians got into trouble they came to my father and after he died they came to me for advice. Later on, I, as a Deaconess, spent a great deal of time among the Indians. From the best of my knowledge gained by close contact with the Indians, and from what I have learned of their past history, I am convinced that the Indians of this vicinity did not set fires to the timbered lands as they are sometimes charged with having done.

#### The Tehachapi in 1854

In "Reminiscences of a Ranger" by Major Horace Bell he gave the following description of the Tehachapi in 1854:

"Tehachapi, at the time this truthful historian enjoyed the proud distinction of being the 'first White men' was the most beautiful and romantic place that is possible to conceive of a region so elevated and windy.

"The valley proper, or pass is a wide open plain, and the grass, only trodden and cropped by the innumerable herd of deer and antelope that inhabit the region, was most abundant. Beautiful contiguous smaller valleys, romantic canyons, forests of pine, groves of evergreen and spreading oaks, purling brooks, gushing springs, green meadows, verdant slopes and craggy heights all went to make a picture of arcadian beauty that would have raised the enthusiasm of a landscape painter to the seventh heaven of bliss."

Compare the above with the Tehachapi of today that has been overgrazed and burned until erosion is serious on most of the land in that region.

### 1860-64 - Up and Down California

Under date of September 11, 1862, William H. Brewer, in his book "Up and Down California 1860-64" described the timber on Mt. Shasta, which he was then climbing:

"We soon take to the woods and follow a trail directly toward the mountain--the first four miles up a very gentle slope, among trees that must be seen to be at all appreciated--pines, firs, and cedars, all of species peculiar to the region west of the Rocky Mountains. Cedars over 100 feet high and 4 to 6 feet in diameter, firs 200 feet high, sugar pines often 200 and even 250 feet high, possibly even more. Fire had been through the woods and hundreds of trees had fallen, some this year, but more in past years. I had the curiosity to measure one prostrate tree. It was about 7 feet diameter at the base and lay along the ground for 225 feet, and was then burned off where it was still 9 inches in diameter. The burnt tip must have been 40 feet longer. These gigantic trees, straight as arrows, formed a magnificent forest." p. 312

On October 22, 1863 William H. Brewer writes as follows of conditions around Seiad Valley on Klamath River, as viewed from the Summit of the Siskiyous:

"The day was very smoky, and the landscape spread out around us rough in the extreme--the whole region a mountainous one--the peaks five thousand to seven thousand feet high, some indeed much higher--and all furrowed into deep canyons and sharp ridges, many of the former over two thousand feet deep. The hills are covered with scattered timber, not dense enough to be called forests, or in places with shrubby chaparral. With the exception of the ranch below us there is no tillable land; there is nothing to make the region ever a desirable home for any considerable population.

"The whole of this wide landscape was bathed in smoky vapor, and the mountains faded in it at no great distance. On a clear day Mount Shasta is in view in the southeast, and the ocean in the southwest, but then both were invisible. It would be difficult to say where the smoky earth ceased and the smoky sky began." pp. 480-81

### 1870 - Yes, We Had Some Chaparral

Another "old timer" who intimates that the mountains of northern California were not entirely devoid of brush in the early days is Clarence King, author of MOUNTAINEERING IN THE SIERRA NEVADA.

In his description of the view from the summit of Mt. Shasta on a clear summer day in 1870, he says "Southeast the mountain spurs are smoothed into a broad glacis, densely overgrown with chaparral, and ending in open groves around plains of yellow grass."

From his timber line camp when enroute to the summit, he says, "Already above vegetation, we looked out all over the valley south and west, observing its arabesque of forest, meadow and chaparral."

A later trip was made around the mountain, including a side trip to the McCloud glacier. Enroute to this glacier, King says, "Such dense, impenetrable fields of chaparral cover the south foothills that we were only able to fight our way through limited parts."

### 1869 to 1900 - What John Muir Said About Fires

Probably no man of whom we have record had a better personal knowledge of the mountains of California than John Muir, the naturalist and student who from 1869 on for 40 years rambled every nook and corner of the Sierra and Coast Ranges, keeping careful note of what he saw and heard. Much of this he set down in his book "The Mountains of California", and what he says there largely exonerates the Indian and mountaineer, and hangs the blame right where it belongs, which is on the early day stockmen, and particularly the sheepherders who were a law unto themselves until the creation of the National Forests and the passage of state fire laws gave the public some protection.

Muir speaks of general Forest damage as follows:

"Incredible numbers of sheep are driven to the mountain pastures every summer, and their course is everywhere marked by desolation. Every wild garden is trampled down, the shrubs are stripped of leaves as if devoured by locusts, and the woods are burned.

"Running fires are set everywhere, with a view to clearing the ground of prostrate trunks to facilitate the movement of the flocks and to improve the pastures. The entire forest belt is thus swept and devastated from one extremity of the range to the other.

"Indians burn off the underbrush in certain localities to facilitate deer hunting, mountaineers and lumbermen carelessly allow their camp fires to run; but the fires of the sheepmen or 'mittoneers' form more than ninety per cent of all destructive fires that range the Sierra Forests."

Describing the lodgepole pine, he says:

"The two leaved pine, more than any other, is subject to destruction by fire. The thin bark is streaked and sprinkled with resin, as though it has been showered down upon it like rain, so that even the green trees catch fire readily, and during strong winds whole forests are destroyed, the flames leaping from tree to tree, forming one continuous belt of roaring fire that goes surging and racing onward above the bending woods, like the grass fires of a prairie."

In talking about the ground cover, Muir says:

"A great portion of the woody plants that escape the feet and teeth of the sheep are destroyed by the shepherds by means of running fires which are set everywhere during the dry season for the purpose of burning off the old fallen trunks and underbrush, with a view to improving the pastures, and making more open ways for the flocks.

"These destructive sheep fires sweep through the entire forest belt of the range, from one extremity to the other, consuming not only the underbrush, but the young trees and seedlings on which the permanence of the forest depends; thus setting in motion a long trail of evils."

#### 1870 - In the Days Before Light Burning

A short time ago I had a talk with Mr. A. T. Welton of Stonyford about range conditions on Snow Mountain in the early days.

Mr. Welton is now in his 86th year and has been a resident of the Stonyford community since 1869, and the truth of his statements is never questioned by those who know him. Mr. Welton's story is about as follows:

He came to Stonyford, or Smithville, as the town was then called, in 1869 and for several years taught the local public school.

It was his custom each Saturday morning to get on a saddle horse, with a gun, a blanket, and some supplies, and go back along the base of the mountains, and hunt and fish, returning to the settlement Sunday evening. On one of these trips in September, 1870, he camped near the present site of Fouts Springs and while hunting on what are now called Moon Glades, he came upon a trail leading from the glades up the side of Snow Mountain. His curiosity being aroused, he returned to camp, got his outfit and started out on this trail to see where it would lead him. After following it for several hours, he came out near Big Rock on Snow Mountain at the place now known as Folk Cabin.

He thought the country around the top of Snow Mountain the most wonderful mountain country he had ever seen. There had never been any stock grazed there and all the open areas were covered with thick, tall grass, reminding him of grain fields. The timber was very large and so thick that when he rode into it, it was almost dark.

When he returned to the settlement, he could find no one who had ever been to the summit of Snow Mountain. The country up there was so attractive to him that he made frequent trips there to enjoy it.

It was not long after this that sheep men began taking sheep to Snow Mountain for the summer season and immediately conditions there began to change. They overgrazed the open grass areas and as the forage on these areas became depleted they began burning the timber and cherry thickets to open them up and make more feed. The burning of the timbered areas over and over caused a gradually increased accumulation of dead litter which made the areas more and more susceptible to damage by fire and it was only a short time until Snow Mountain had lost its attractiveness for Mr. Welton. He says the overgrazing and burning continued until all the grass was killed out and the groves of magnificent fir timber were thinned out and replaced by white thorn brush, and the top of the mountain became the barren country it is today.

Mr. Welton states that when Snow Mountain was in its natural state, before the coming of the sheep, lightning sometimes started fires around the top of the mountain but these fires did not spread owing to the lack of dead litter on the ground and no damage resulted from them.

It developed later that the trail over Snow Mountain was the trail used by the Upper Lake Indians in the days before the white man, when they came over to Stony Creek to get salt from the salt beds in Salt Spring Valley a few miles north of Stonyford.

Mr. Welton states that when he first went onto Snow Mountain the meadows around Milk Ranch were much more extensive than they are at the present time.

-- Stites, Mendocino

1870 - Statement of W. J. Lord. (He was raised in Tuolumne County and was one of the early cattlemen to go to the higher ranges).

"In the 70s there was a shortage of feed and water on the plains and in the foothills and sheepmen crowded their flocks into the mountains in large numbers. Those who came first took the ranges which were easiest to reach and those who came later had to go to less accessible places for feed. They encountered considerable difficulty in herding their flocks and where brush and timber interfered it was common practice to burn. Most of the burning was done as the sheep were taken from the mountains in the fall to the plains to be put on stubble. This was usually in September.

"Burning at that time became such a practice that people knew when the sheep were leaving the mountains by the number of fires set. Smoke from the fires was so thick at times that it was hard to see at midday. No attempt was made to stop fires unless someone's place was threatened, then backfires were set and usually the fire went some other direction. These fires burned thousands of acres almost everywhere that timber and brush grew in the mountains.

"In the late 80s and early 90s the people began to object to such fires and after a few sheepmen were rounded up and made to put out fires they did not set so many."

1873 -"Mountaineering in the Sierra Nevada"

"Forest officers of Region 5 who have not yet experienced the pleasure of reading the book of the above title by Clarence King, originally published in 1871, will find much of interest regarding the early geological explorations of the high Sierra region and Mt. Shasta. In addition, many of the features of pioneering in California are vividly portrayed, including the picturesque flow of language used by the teamsters in addressing their mules; the unappetizing character of the meals prepared by the Chinese cooks; early hog grazing on the mountain ranges; and a discussion of the merits of the Vigilance Committees.

"In 1873, in connection with his ascent of Mt. Whitney, he wrote as follows regarding his trip across the Kern region:

"The Kern plateau, so green and lovely on my former visit in 1864, was now a sea of rolling granite ridges, darkened at intervals by forest, but no longer velveted

with meadows and upland grasses. The indefatigable shepherds have camped everywhere, leaving hardly a spear of grass behind them.'

"If such evidence of overgrazing was noticeable in 1873, think what it must have amounted to by the time such areas were finally placed under management within national forests!" -- Coffman, Park Service

1876 - P. Y. Lewis gave the following statement:

"In 1876 and 1877 I went to the mountains with sheep and grazed them along the Mokelumne River in Alpine County, spending the greater part of each season on the south side of the river between Hermit Valley and Horse Creek. We fed the early part of the range first, moved up the river to the upper part as feed advanced and then fed back over the same ground as we came down toward the foothills. When we turned back toward the foothills, we started setting fires and continued setting them until we reached the foothills. We burned everything that would burn, such as brush, young timber and grown timber, setting the fires behind the sheep as they grazed back over the range the second time. The sheep moved but a short distance each day and we spent a large part of the time in setting the fires. The sheepmen on the neighboring ranges set fires about the same as we did, and in the latter part of the season there would be fires as far as a person could see. Large tracts of excellent timber were destroyed and became brush fields later, but the sheepmen did not care as it was thought that fires improved the feed and removed the timber which interfered with the sheep.

"It was regular practice for the sheepman to set fire to everything such as logs, trees or brush that interfered with the sheep between the ranches and towns in the foothills to the upper part of the range he used."

1877 - California Indians Not "Light Burners"

I have read through Stephen Powers' most interesting book on the Indians of California (Contributions to North American Ethnology, Vol. 3, published in 1877 by the U.S.G.S.). The author spent three years among the Aborigines of California and his book goes into minute details, covering every feature of Indian life, including their legends.

In going over this book carefully one is struck by the fact that nowhere in it does the author intimate that the natives

were in the habit of firing the valleys or mountains for the purpose of improving hunting conditions. Powers carefully describes the hunting practice of many tribes prior to and subsequent to the advent of the "gold hunters", but nothing is said anywhere to indicate that the Indians periodically burned over the country as many now contend. The only reference to this matter is in the legend of the Wishinim tribe regarding the origin of fire. According to this legend the lizard was selected to steal the fire from its source. This the lizard was successful in doing and then it started for home. At this point the legend reads as follows:

"At length he reached the western edge of the Sacramento Valley and he had to be extremely careful in crossing it, lest he should set the country on fire. He was obliged to travel by night to keep the thieves from stealing the fire, and to keep the dry grass from catching fire."

This does not read as if the real natives of California were "annual firebugs". Powers was so careful in his descriptions of every phase of Indian life that it does not seem that he would overlook such an important matter as the annual burning of the country providing it was actually practiced.

Powers does state that in the Southern Sierra the Indians used to fire the forests at times in order to catch great quantities of grasshoppers and caterpillars already roasted, which they downed with relish. Early day records show that Indians of California captured deer largely by (a) running them down, (b) digging pits into which they fell, and (c) by dressing up in a deer skin and stalking them. No mention of running them out with fire is found in Powers reports.

1880 - The following is quoted from a report submitted to the Department of Agriculture:

"In October, 1880, a circular was issued by the Department of Agriculture to its correspondents in the several states and territories, with the view of ascertaining the extent of injuries that have been observed from forest fires, the cause so far as known, and the methods commonly employed for preventing or arresting these fires when started and under way. The circular invited such suggestions as might appear advisable concerning means for preventing the continued recurrence of these calamities.

"In commenting upon the returns received for the entire United States, Mr. Hough states as follows:

"Correspondents, in reporting the causes that originate forest fires, must necessarily depend upon their opinions rather than upon certain knowledge; for in a great majority of cases the origin of these fires is to them unknown. They may have received their information from hearsay, and these rumors may have been purposely started in the wrong direction by the parties really guilty of the wrong to divert public indignation or avoid legal consequences. Giving to each assigned or supposed cause an equal credit, the summary, in numerical form, is as follows:

Natural causes - lightning .....	3
The direct or incidental act of man ....	464

Of the latter, the Indians are charged as the originators in 21 cases, the remainder being ascribed to civilized man. The motive with the former is supposed in most cases to have been hostility to the whites, and a desire to harm them as much as possible. It will be remembered that these returns often refer back to a still recent period of Indian hostilities in Colorado, New Mexico, and the northern tier of Territories. In a very few cases their custom of burning to drive game, etc., is mentioned; while on the other hand, in Oregon, they are mentioned as having formerly been scrupulously careful, in the use of fires, lest the feed for their horses should be destroyed, and that so long as they remained sole occupants of the country, forest fires were unknown. Reducing these numbers to percentages, we find of the whole number 0.0063 ascribed to natural causes and 0.04 to the Indian. Of the 439 ascribed to the white man, 30.3 are due to intention, and 69.7 to carelessness, the greater part being avoidable, and if not in the starting of the fires, to a great degree in the provision that might previously be made for their suppression."

#### 1882 - This Applies to California Settlers

From "Report on Forestry", by F. B. Hough, dated 1882, the following is taken:

The importance of the injuries that are done to forests by running fires has led us to give particular attention to this subject, as directly relating to the maintenance of forest products within the United States. It is observed everywhere, that in the first beginnings of a settlement, whether in a forest region or upon the prairies and the plains, the dangers from running fires are greatest, and that they gradually diminish as the region

becomes thickly settled and well cultivated. It is further to be remembered, that the earliest of the pioneers in a new settlement, are often those who do not make permanent improvements, but under a restless desire for change they seek a new field of enterprise long before the society around them has become permanently settled and well established. This unstable and transient class, the first beginners, are generally persons of slender resources, and have little to lose. They are accustomed to regard the world around them as open for their use, and in matters of pasturage for their stock, as well as forest products for their own supply, and often for such little industries as they can undertake upon a small capital or by their own labor, they often appropriate wherever it is most convenient. It is from this class of our population that we have the most to fear in the way of forest fires. Habitually careless and improvident, they do not hesitate, where there is a motive and an opportunity, to apply fires to lands not their own, for the purpose of improving and extending the range for their cattle, or to clear lands for cultivation, and sometimes to destroy the evidences of their own trespass and depredations.

Extracts from Report of California State Board of Forestry -  
1885-1886

The present fires that desolate the forests of California are a violation of law and are exceedingly destructive to public property. After continued earnest effort, in many cases with legal advice at our own private expense, we are obliged to report that we cannot arrest nor convict these fire-settlers without the assistance of special officers who can be sent into the mountains to secure evidence and find the depredators.

1885 - El Dorado County

All over the timber belt, and throughout the county generally, where the timber is cut off or destroyed, and the land remains undisturbed, young pines, fir, spruce, and other timber common to the country springs up almost like magic, and grows very thick, as also in parts does the different varieties of brush. The fires do most damage to these young growths of timber. Fires arise from various causes -- clearing of lands, carelessness of campers, stock herders, hunters, etc.

1885 - Placer County

One fire last year burned along American River Hill one mile wide by three in length. Another two miles near Lincoln. Damage by last, say, \$10,000.

1885 - Santa Cruz County

Fires are frequent during the summer months, sometimes extending over thousands of acres, but do not destroy many of the trees, they being fed by the brush and underwood; trees are badly scorched at such times, but they sprout again and appear to grow more vigorously as does the brush.

1885 - Santa Barbara County

The live oak forests have suffered but little from fires, yet the small trees on the mountain sides have been destroyed in that manner.

After a severe fire in the Santa Inez Mountains, at the head of Carpenteria Creek, I ventured a statement that the demudation of the watershed of that stream would increase the liability of floods, and during the following winter a so-called cloudburst occurred, which destroyed much property and two lives, changing the course of the creek in some places.

1885 - Ventura County

Mountain fires completely destroy the fine forests, and there grow up in its place chaparral and chinquapin oak, both worthless.

Appoint an agent to look after the forests, who should reside in the immediate vicinity, and empowered with authority to stop hunters and other parties from setting out fires.

There is perhaps no part of the forest but which has been ravaged by fires. The burned trees in remote parts show that at some time fire has passed over the woods. As to their origin, no definite information can be had in the lower and central zones, but I think it can be safely affirmed that at an elevation of three thousand five hundred to five thousand feet (the region of the sawmill post and shake business) the people are reasonably careful to prevent fires, because it would be injurious to them, as the woods always contain logs, wood, shakes, and posts that would be destroyed in any extensive fire above this elevation. The stock men (cattle and sheep) are charged with deliberately firing the forest so as to clear underbrush and afford a crop of grass for the ensuing year. More of this burning is done on the high Sierras than elsewhere. I have found it very difficult to get exact information from the citizens about this matter, and further than the general statement given above they do not like to go.

From the headwaters of Russian River to the Klamath River, and as far east as the south fork of the Trinity, the country is devoted to sheep raising, predominantly; the strip from Spruce Grove to the Mattole River being generally used for the same purpose. . . . As ranges deteriorate under the influence of over-stocking, the remedy sought is to render new lands available through burning of brush and girdling of timber. Sheep lands are held at from five dollars up. As the value of land increases, the clearing of timber to render the land fit for grazing will increase, and considerable quantities of timber will be cleared off in this way. Systematic attempts to improve the quality of sheep lands are not common, the writer knowing but one exception to the general rule. Here the best brass patches are fenced in and guarded, the grass allowed to ripen, when it is threshed and the seed collected. Brush lands (mostly scrub-oaks) are then fired and the seed sown upon the ash-strewn clearings, the grass used being a species of Australian cheat. The lands thus artificially stocked with grass are said to possess twice the efficiency of the natural open lands. In connection with the subject of sheep lands, it should be mentioned that the pernicious practices noticed in a great measure affect property still belonging to the Government. There are ranges covering thousands of acres which are controlled (not owned) by sheep men, their holdings simply covering the strategic points of the range, possession of the water sources generally sufficing in itself to attain the desired end. Holding these points, the balance of the range is of no value to any one else, and his herds range undisturbed over public lands. These lands are effectually excluded from settlement, the County and State governments deprived of legitimate sources of revenue, and at the same time valuable public property rapidly going to waste. The timber depredations upon public lands are but matters of minor moment compared with the gradual, but widespread ruin which is being brought about by sheep-ranging.

1885 - (Ventura County) Nearly one-half the native forest has been destroyed by fire. (S. P. Guiberson, County Clerk, 1st biennial report State Board of Forestry, page 20).

1885 - Forests of Los Angeles, San Bernardino and San Diego Counties, California.

Every year disastrous fires sweep off vast areas of this mountain covering. These owners set no watch and take no heed of their property, and the fires run into and destroy the timber as well as the brush. This careless and wasteful destruction of the forests is injuring the climate, the agriculture, and the future prospects of Southern California.

### Examples of Forest Destruction

#### 1881 - Los Angeles

The Southern Pacific Railroad was built into the City of Los Angeles through the Soledad Canyon. Until 1883, no serious damage was ever done this road by floods in that location. But about two years before this time certain parties, having stock pastures on the mountains forming the watershed of this canyon, commenced deliberately to set fires in the brush and forests on these watersheds, the idea being to improve the pastures and keep the trails open.

There are some fifty or seventy head of horses pastured through this extensive district. These fires destroyed the water-holding capacity of the mountains. As a result, the heavy winter rains of 1884 washed out the entire railroad, roadway, bridges, and all. Travel and business were delayed over six weeks. The railroad repaired the damages done, and the next year being very dry, no injury happened; but the year following, on an ordinary rainfall, measuring less than many of those that had previously done no damage, the railroad again sustained heavy losses.

It is probably no exaggeration to say that it would have been cheap and good business for the railroad company to have paid Jack Talbot and his friend Texas \$5,000,000 to have kept away from the watershed of the Soledad Canyon.

#### 1885 - Los Angeles

Mr. James Craig, of the Hermitage Ranch, informs me that for some years after the great Edwards fire on the watershed of the Precipice Canyon that stream diminished in its summer flow without regard to the rainfall, and is only now becoming itself again. This fact forced itself on Mr. Craig, as his entire water supply came from this stream. In one place this watercourse was filled up sixteen and a half feet, by actual measurement, with sand and boulders.

#### 1885 - Los Angeles

Mr. P. L. Washburn, of the Los Angeles Herald, who owns four hundred acres in the southern end of Kern County travels over the country in going to his place and he says that last summer alone, probably owing to the large influx of settlers, fifty thousand acres of brush and forest land were burned off on the north side of the Sierra Madre Range, from the Cajon Pass west to the mountains where he is. Consequent upon this, the water is cutting gullies in numerous places burned off, or below such places, and is running during the rains in dangerous and destructive torrents.

### 1885 - Los Angeles

Mr. Arturo Bandini, whose family have long resided in Southern California, tells me that his relatives and their vaqueros, or herders, say that in their experience the perennial character of many streams and springs has been destroyed and the pasture injured by the extensive cutting of oak and other trees and the burning of the brush on the mountains.

### 1885 - Santa Barbara

Three years ago a stupid fellow started a fire on the upper waters of Mission Creek, said stream being the main supply for the inhabitants of Santa Barbara City. This fire raged through a dense, heavy underbrush, and forest of oak, sycamore, and pine. The enormous heat of the accumulated growth of ages burnt the ground to a cinder, and nearly all the large trees were killed to the root. After the fire we carefully surveyed our chances of reclamation, and decided to try the planting of artificial forest. Cypress and willow were set out, and seeds from the adjacent pines were planted. The heavy rains of the following winter caused an overwhelming torrent; the soil of the burnt district gave way; landslides occurred; our dam was choked with sand and boulders at each succeeding flood, and our planted trees and seeds were washed seaward. Since that time the scarp of the mountain stands out bold and desolate; in many places bared rocks only appear; while the upper district of Mission Creek must remain bare of all vegetation. In the lower portion of the burnt district, along the canyon, chaparral has started a new life and if unmolested further the brush growth will soon afford grateful shade to the waning stream. The fire has naturally reduced the flow of Mission Creek. A tributary, its east fork, originally of much less volume, still unmolested by fire or axe, now contains nearly, if not quite, the same flow as the main stream.

When I first saw the watershed of Mission Creek, at Santa Barbara, it was covered with a rich mantle of verdure.

### 1885- Ventura

Hon. Brice Grimes, of Ventura, informs me that within the last four or five years the Santa Clara River and those of its tributaries whose sources have been stripped of timber and brush, now run more violently and destructively than formerly. As a consequence the Santa Clara Valley is being much injured by floods. Estimates from individuals on different parts of this river show that between one thousand and five thousand acres of good land have been cut away by changes in the channel of streams, or covered with debris, so as to be entirely worthless.

1885 - Los Angeles

Mr. John E. Jackson, for many years County Surveyor of Los Angeles, and at present Land Valuer of the Southern Pacific Railroad Company for the southern counties, has given me the result of his observation of what has taken place here within his experience. He says that there is not a single important watershed in this section that has not been more or less devastated by fire. Equally, that there is not an important watercourse in the section that has not, within his personal knowledge, materially changed in character. Every one of our watercourses, Mr. Jackson says, is now bringing down more sand, boulders, and debris than was formerly the case. The same rainfall now creates more rapid and destructive floods than it did before the waste of the mountain verdure.

1885 - Forests of Amador, Calaveras, Tuolumne, and Mariposa Counties, California.

In addition to the forest trees, mention should be made of the chaparral, chemisal, and manzanita, that cover nearly all the open country between five hundred and three thousand feet elevation, the latter reaching an altitude of over eight thousand feet, and there being a low shrub.

Losses by forest fires. There is perhaps no part of the forest but which has been ravaged by fire. The burned trees in remote parts show that at some time fire has passed over the woods. As to their origin, no definite information can be had in the lower and central zones, but I think it can be safely affirmed that at an elevation of three thousand five hundred to five thousand feet (the region of the sawmill post and shake business) the people are reasonably careful to prevent fires, because it would be injurious to them, as the woods always contain logs, wood, shakes, and posts that would be destroyed in any extensive fire above this elevation. The stock men (cattle and sheep) are charged with deliberately firing the forest so as to clear underbrush and afford a crop of grass for the ensuing year. More of this burning is done on the high Sierras than elsewhere. I have found it very difficult to get exact information from the citizens about this matter, and further than the general statement given above they do not like to go.

Sheep lands inside the Redwood Belt. As ranges deteriorate under the influence of overstocking, the remedy sought is to render new lands available through burning of brush and girdling of timber.

1885 - San Diego

At least one third of the land covered with brush, grass and oak timber in the southern part of this county has been burnt off by

settlers within the past eighteen months, doing a great deal of damage, not only as regards pasturage, timber and bees, but also decreasing the reservoirs of water, which the absence of brush will effect, to a certain extent, the same as timber. These fires are caused by careless settlers, who at the time only intend to burn a few acres of brush, but everything being very dry at the time the fire soon gets out of their control, and the result is the fire takes everything before it. I have seen these fires spread five miles square in a few days.

#### 1885 - Plumas County

Destruction of the Government Timber. Respecting forest fires, I have to report that they have, during the past summer, and up to the present time, been rather numerous in this quarter of the State, and some of them quite extensive in area, doing much damage. Around Big Meadows, Indian and American Valleys, and elsewhere in the county, fires have raged at intervals during the summer; and, though the damage is not very serious in any one locality, yet in the aggregate it is calamitous. Two summers ago a forest fire occurred in the Cherokee Mining District, near Greenville, that consumed a \$5,000 quartz mill. Two of the most extensive and destructive fires in the timber adjacent to Indian Valley were the result of lightning, one of the causes of fire on the timber domain. Other causes are, presumably, the carelessness of hunters and stockmen and, inferentially, the work of some of the sheep men who desire better pasturage on the burnt districts the following season.

#### 1888 - Santa Cruz

##### Burning Timber

"Large Forest Fires Raging in the Santa Cruz Mountains  
"San Jose, October 23, 1888

"Mountain fires north of Santa Cruz are doing much damage in the woods, and at times are threatening houses. Much timber has been destroyed, and the flames are spreading so rapidly and covering so much territory that considerable alarm is felt. The station house at Wrights and the bridge of the Southern Pacific Railroad have just had a narrow escape." - San Francisco Daily Examiner,

October 24, 1888.

#### Fire Conditions in 1888

The following data on forest fires in California was taken from the Second Biennial Report of the California State Board of Forestry for the years 1887-88. It contains some excellent data to

use in combatting the light burning theory and also pretty well disposes of the old contention that the Indians were responsible for most of these fires. It also shows that light burning was very destructive of mature timber, as we have always contended. The members of the State Board of Forestry at the time this report was prepared were Abbott Kinney, John D. Spreckels, and Walter S. Moore, all prominent business men of California:

The most disastrous fires, from a forest point of view, are unquestionably those started by the sheepherders who drive their flocks into the higher regions of the Sierras to feed during the summer months. These men, ignorant and shiftless, as a rule, do not comprehend the magnitude of the injury inflicted upon forests by fire, and looking upon our vast mountain ranges as "No man's land," think that it does not matter in the least how they treat them. A great many of these herders, especially those who return year after year to the same grazing regions, set fire to the under-growth upon leaving in the fall, so as to improve the herbage of the following spring and summer. Removed as they are from all human habitation, they are free to commit whatever depredations they please without the least fear of detection, for when a forest fire occurs in the region which they are occupying with their sheep, although the presumptive evidence may be strong as to the origin of the fire, still there were no witnesses to the deed, and no one can be held responsible. If our mountain ranges are to be continually used as a free pasturage for sheep and other animals, it would appear that the only method that can be adopted to check forest fires is to divide the heavily timbered mountain ranges into districts, each of which shall be supervised by a forester, or guard, whose duty it shall be to acquaint himself with the location and the name of the owner of each band of sheep, cattle, or horses, that may enter his district, and then in case of any herder setting fire to the woods, his employer should be held responsible for all damage done. This plan would, of course, necessitate the control of the forests being in the hands of the State, and until this is accomplished, there seems to be but very little hope of preventing fires in our mountain forests.

An idea very prevalent with the majority of the people, is that forest fires only destroy the underbrush and young trees, and that the larger and full grown trees are uninjured, or at most only scarred. This belief is very erroneous, as I have seen, notably in Shasta County, trees two hundred feet in height, blazing clear to the top, and dozens of them burning at the same time, and anyone traveling through the Sierras cannot fail to notice the large number of charred and half burned stumps of large trees, often twenty feet high, whose tops have fallen when the trunks were half consumed, and were themselves wholly or partially consumed upon the ground.

These larger fires which consume matured trees, confine themselves entirely to the forests of pine and fir, the trees of which being rich in pitch, catch fire very easily and give out an intense heat. These fires often assume such proportions that the atmosphere at a distance of fifty miles from the scene of the conflagration will assume that hazy appearance caused by dense smoke. In the Sierras, the largest and most destructive fires occur almost invariably in those regions used for pasture. Fires occur more or less frequently near habitations, caused by the carelessness of settlers in clearing land and allowing their brush fires to get beyond their control and escape into the surrounding forest; but they form but a small percentage of the total number. Hunters, and especially Indian hunters, are blamed for many fires, but they are probably not guilty of more than 20 per cent of the charges made against them, and each year sees even this small percentage lessened. The Indians were undoubtedly at one time the chief cause of forest fires; setting fire to immense bodies of woods in order to clear out the underbrush that they might more easily hunt and capture game; (there is nothing to prove this statement, LAB) but they have ceased such practices long since, and have become so reduced in numbers, that but small bands, or more often but three or four, hunt in company, and they practice stalking almost entirely. In those districts in which the Indians were accustomed to set fires, the discontinuance of that custom has resulted most beneficially to the young forest growths.

Teamsters freighting over mountain roads are occasionally the cause of fires, either by neglecting to extinguish a camp fire before leaving a camping place, or by setting fire to a windfall which has toppled across the road, from which the underbrush ignites and starts a forest fire.

Our conifers suffer most from fires, and especially the two-leaved pine, or tamarack pine (*Pinus contorta*), which, above the fir belt, forms the bulk of our alpine forests. The thin bark of this tree is so streaked with resin that even the green trees catch fire, and during high winds the flames speedily advance, leaping from tree to tree, and destroying entire forests. Slow and smouldering fires that creep along the ground, feeding on the litter of burs and needles, on arriving at the foot of a tree, ignite the resinous bark, and a flame of fire shoots up to the top of the tree of sufficient heat to kill it, and the bark gradually drops off, and then the branches fall, leaving only the trunk. Miles of territory in the upper Sierras may be seen apparently staked out with bleached spars.

While the injuries done our forests by fires are to be deplored, there appears to be no hope of checking them under the present condition of affairs, and until a general system of protection is devised and put into operation, they will be compelled to suffer.

1888 - Writing about the fire situation in California Edward Collins, Special Agent of the State Board of Forestry, said:

"During the summer months extensive forest fires prevailed throughout the mountain regions. It is true, some of these are unavoidable, but the vast majority are the results of negligence and carelessness and their originators should be promptly prosecuted when discovered. The most destructive fires I have ever witnessed were set by sheepmen for the purpose of removing chaparral and undergrowth..... It is evidently useless to prosecute those whom we believe responsible for the fires, unless they are directly caught in the act. To watch and detect violations of the law would require a large force of patrols, a costly and at present impossible undertaking. As these ranges are mostly on unentered and unsurveyed Government lands, a cheaper and more effective method of procedure would be to secure the passage of an act of Congress prohibiting the use of these lands for such purposes. It would then be a comparatively easy task to remove from those regions this nomadic and irresponsible class of men."

1889 - The San Francisco Examiner of September 5, 1889 had the following article about fires:

"Further complaint of the wholesale destruction of the timbered forests by sheep herders through the state are being made every day.

"C. M. Dabney of Fresno arrived in the city yesterday for the purpose of making known the damage done to the mountain forests of that section of the country by the herders having the roving bands of sheep in search of feed..... He says the sheepmen come up into the mountains ..... to procure feed for their sheep. After they have cleaned up the pasture they go down to the valley again leaving the forests behind them on fire, trees falling and blocking up the trails behind them. .... On a part of the land of the Emma Nevada Mill site I counted over 2000 burned and fallen trees. .... The old trail between the Northfork mining district and Bishop Creek was covered with fire and fallen trees until a few days ago when a heavy rain extinguished the blaze. Men arriving from North Fork of the San Joaquin state that from Snow Canyon to the river the whole country had been set on fire by the sheep herders .... The burning of these forests by the herders is the greatest calamity of the state. The North and South Forks of the great tributaries of the San Joaquin River in a few years will

be dry. The snow has disappeared from the west side of the minarets. In previous years these snow banks a mile long and 40 feet deep were perpetual. The streams from this great watershed are today lower than they have been for 30 years. There seems to be a combination of sheepmen, ..... who pay no taxes, have no homes, defy our laws and who say they do not understand English, to burn these magnificent forests as they go along. Every year they start fires as they leave the mountain forests for the purpose of clearing them out and preparing fresh pasturage for the next year. The weight of the fresh snow coming on fells the half burned trees and the sheepmen set fire to them as they lie on the ground thus burning the young shoots springing up. The consequence is the destruction of the great forest ..... and the drying up of the watershed.

"If the Board of Forestry have sub agents throughout the State to prevent forest fires why don't they send men of intelligence to follow the sheepmen? A suggestion is for the people at large in Fresno County to commence suit against every sheep owner and hang the herders as they arrive from the mountains in Fresno Flats, Madera and Fresno City. The coming year 1890 freshets may be expected in the San Joaquin. It is said that no agency except forests can hold back the rains in the mountains."

#### 1890 - Commissioner's Report

In the passage of many wise and conservative measures having a single eye to the importance of this question, the one thing above excepted, and which seems to have escaped the vigilance of framers of laws protective to fish and game, is the danger to both in our constantly recurring forest fires. Large game driven out and away from the shelter of the timber; smaller species and the young of all burned up in countless numbers.

Close seasons for game fishes are rigorously prescribed, and with but few violations are generally observed, yet continuous and unabated open seasons are fraught with less danger of extermination to the finny inhabitants of any stream than the destruction by fire of its timber-sheltered watershed; the uniformity of the flow, the coolness of the waters, and the supply of food are all enhanced by the adjacent forest -- materially impaired and endangered by its loss.

Timber speculators and sheepherders are already making havoc of these forests, the former cutting the timber recklessly, the latter destroying the undergrowth and often kindling fires, by accident or design, which cause widespread destruction of the forest floor and vegetation of all kinds. The result is an alternation of floods and droughts in the valleys below, with which any proper system of irrigation is incompatible, and which if continued will make agricultural pursuits no longer practicable, and turn this now fertile region into a desert again.

Protection from fire. Climatic conditions are peculiarly favorable to the origin and spread of fires, and the sparseness of settlement in the timber portions of the State makes it impossible, in many cases, to procure enough help to check the progress of fires, even when they are discovered in time. Toward the end of the long, hot California summer, all vegetation is dry, and the debris on the forest floor is like tinder. A spark carelessly dropped, or a burning wad from a gun, may set fire to the grass, and if a smart breeze happens to be blowing the fire spreads with great rapidity and gets beyond control in a very few minutes.

If the State can stop the wanton destruction of forests by fire, it will do more for the cause of forestry than it ever has done.

Yosemite National Park. Usually there are forest fires in all directions in September and October, and the air is so filled with smoke that nothing can be seen from the mountain tops. The Washburn Brothers, who have kept the hotel at Wawona for years, testify that heretofore a pall of smoke has hung over their place in the fall, obscuring the sky, hiding the mountains, and at night settling down into the valley and making it difficult to breathe. Two years ago they had to fight fire for two weeks, and it was with difficulty that all the men who could be collected saved the Mariposa grove of Sequoias from a scorching that would have destroyed half the trees. The course of that fire can be traced through the forest by blackened skeletons of trees, fallen and standing, and the absence of any growth of saplings. In fact, the forests all through these mountains bear the ugly scars of fires that have swept through them year after year.

And yet there are some men who deny the sheepherders are responsible for the destruction of timber in the Sierra. One old resident has invented an original theory to account for forest fires. He attributes the most of the fires to spontaneous combustion, and what is more, he has seen the forests spontaneously combust. He avers that he has seen the top of a sugar pine burst into flames in the middle of the day, and he has seen fires start on the top of

Cathedral Rocks, where the foot of man never trod. His theory is that globules of pitch concentrate the rays of the sun, just as a burning glass does, and set fire to themselves. But there has been no spontaneous combustion in the Yosemite Park since 1890, and I am inclined to regard the absence of sheepherders and the non-occurrence of forest fires as something more than an accidental coincidence.

The damage done to the great forests of the high Sierra cannot be appreciated nor understood until one has traveled through them, along the lines followed by the sheep.

The desolation of the country is intensified by the absence of animal life, but more serious than the destruction of the game is the irreparable injury to the forests on the watersheds of the large streams that are fed by the snows in the high Sierra. The timber is mainly fir and tamarack, interspersed with black and yellow pines. The pines resist the action of fire to some degree, although not so well as the Sequoias, but the fir that is once scorched at the base is doomed, and the thin-barked tamarack is not more hardy.

To the casual observer the fir forests seem to be in fairly good condition, but a glance at the tops of the trees that might be supposed to be sound will tell a story of internal decay. When one's attention has been directed to the fact, he will see that the finest looking trees are dead at the tops and at the ends of the larger limbs, and that nine tenths of the large trees are in that condition.

Thomas Agnew, a miner, who has lived for many years on the headwaters of the San Joaquin, has noted with care and intelligent interest the effects of fire upon forest trees, and he has noticed that a scorched fir becomes a hollow shell, while apparently sound and retaining most of its foliage, and will fall in about ten or twelve years.

The vast number of fallen firs in the forests on the headwaters of the San Joaquin corroborates Agnew's statement. Wherever the fires have been frequent the fir forest is ruined.

Three years ago last October, when Thomas Agnew came down out of the mountains, he counted ninety-two fires on the watershed of the San Joaquin between his place and Jackass Meadows. The sheep had gone out just ahead of him. Last year there were no sheep in that part of the country, and there was not a single fire.

1891 - Forest fires. More damage is done to our forests by fire than by any other destructive agency, and if some methods of preventing and extinguishing forest fires, more practical and effective than those now available, are not devised, the State will have to grapple not only with the problem of forest preservation,

but with the vastly more difficult and expensive work of reforestation.

I have not yet at hand the information upon which to base an estimate of the loss to this State by forest fires during last year, but in the preceding year, 1890, the estimated direct loss to California from this source approximated \$15,000,000, and this does not include in any way the indirect loss in damage of the watercourses, and consequently to the valleys and plains, by the destruction of these forests.

1900 - George B. Sudworth's report of 1900 on the Stanislaus and Lake Tahoe Forest Reserves blames most of the forest fires in that region on sheepmen.

He says:

"To determine exactly how much damage sheep grazing does to reproduction would require extended careful study of sheep-grazed forest land entirely free from fire; but, carefully considered, there is a close relationship between the origin of many forest fires and sheep grazing. How generally sheepherders are accountable elsewhere for fires cannot be stated, but the writer's observations in the region under consideration show that a large number of fires are due to the presence of sheepherders. Some of these fires were due to carelessness and some were purposely set. Several fires destroyed thousands of conifer seedlings and also set fire to hundreds of acres of large standing pines previously burned in the trunk and thus continued this peculiar gradual destruction of timber which is going on so generally from year to year.

"These fires proceed from neglected camp fires, from purposely fired fallen timber, and also from the deliberate setting of fires in high chaparral. Fallen timber forms troublesome barriers to driving sheep along regular routes, and the herders set fire to these logs, usually as they are leaving a 'fed-out' range, in order that the way may be open on their return. No less than seventeen fires of this kind were found on the trail of one band of sheep, covering a distance of 10 miles. The other kind of burning referable to sheepherders occurs in high manzanita and ceanothus chaparral. This brush finally grows so high that sheep can not feed from it, and in places is often so dense that they can not pass through it. These areas are burned over either to produce low sprouts or for the double purpose of feed and access. It frequently requires two seasons' burning to clear away manzanita brush -- the first to kill the brush and the second to consume the dead, horny stems. Frequent fires of

this kind destroy all young tree growth within the area burned, for, when once started, even the green manzanita burns very fiercely." (pp. 555-556)

Other causes of fires given are:

"Milling operations are productive of fires through carelessness. Jams of tops are frequently set on fire by loggers to open blockaded roads or ways. These fires usually escape and do damage elsewhere. The use of imperfect spark arresters on donkey logging engines is also a source of many fires. A serious fire from this cause was witnessed in timber near the headwaters of Love Creek, where a considerable quantity of standing and cut saw timber was destroyed through the burning of immense quantities of waste tops. Fires occasionally originate from the small clearing operations of settlers in timbered districts. Two fires of this kind escaped from smouldering log heaps and spread through a wide strip of timber.

"There are probably comparatively few fires caused by campers and hunters. This is due to the fact that of necessity such camping is confined largely to the vicinity of road stations and ranches where only, for the most part, it is possible to get horse feed. To a great extent this prevents the promiscuous use of fire by these people at points unguarded by settlers." (pp. 559-560)

1902 - The following is taken from a report on Forest Conditions in the Northern Sierra Nevada, California, by John B. Leiberg, U. S. Geological Survey, 1902.

The region covered by this examination consists of a tract of country situated in the north-central portion of California, between latitudes 39° and 40° north and longitude 120 & 121° 30' west, hence covering a section of the main range of the Sierra Nevada, together with its western and eastern slopes. The region is represented on the Bidwell Bar, Downieville, Sierraville, Truckee, Colfax, and Smartsville sheets of the topographic map of the United States.

The most potent factor in shaping the forest of the region has been, and still is, fire. Fires ravaged the forest long before the American occupation of California. When the miners came, fires followed them. Contemporaneous with the advent of the miners, or soon after, came the flock masters with their sheep. The belief is generally held that the sheep herders fired the country in all directions and have been responsible for most of the fires of recent years. However that may be, all the fires observed during the last

summer closely followed the sheep camps. The only older burns which give any clue to their age are those which stretch in a line from northwest to southeast through the central district of the region. They are marked by the occurrence of large tracts covered with chaparral. Most of these areas are situated contiguous to placer camps, worked from the earliest times, and might be regarded as having been burned over by fires spreading from such camps. In some instances this most likely happened, but a large proportion of the chaparral tracts was denuded of forest so long ago that nearly all the stumps have decayed. Hence the fires which overran them probably date back to the early part of the last century. The fire-marked areas of the region comprise 2,754,770 acres, which leaves only 192,350 acres of tracts now or formerly wooded that have not been visited by fire at least once during the past one hundred years. In this estimate are included all tracts which show clearly the presence of fire some time during the life of the present forest. It is estimated that the areas badly burned - that is, those on which 50 per cent or more has been destroyed - comprise 715,440 acres, and of this amount there are 213,730 acres, in tracts larger than 80 acres, on which the destruction has been total. The region in which the forest has been most severely burned forms a fairly well-defined belt ranging from 15 to 20 miles in width and stretching diagonally across the entire region from northwest to southeast. It enters the region near Table Mountain in the basin of North Fork of Feather River and extends across the canyon of that stream to the high country of the Spanish Peak range. From here it takes a southerly course through the central portions of the basin of Middle Fork of Feather River and the upper portions of the basin of South Fork of Feather River and enters the basin of North Fork of Yuba. Here it swings slightly more to the east and passes through the central portions of Middle Fork of Yuba, South Fork of Yuba, head of Bear River, and central portions of North Fork of American River basins, where it again shifts further to the east and enters Middle Fork of American River Basin east of Westville, continuing southward across the Rubicon River and beyond our area. All along the line of this fire belt smaller lines extend in all directions, but chiefly eastward. The damage done on these tracts fully equals, if not surpasses, the loss of timber on all the other areas put together. The results of forest fires in this region are fourfold. There is, first, the destruction of the timber by burning or root killing, which everywhere is the primary consequence of timber fires; second, there is suppression of young growth, third, a notable increase in the density and extent of the undergrowth, and fourth, the removal of the less fire-resisting trees and the survival of the species best fitted to withstand fire. The land does not carry more than 35 per cent of the quantity of timber it is capable of supporting. The destruction of young growth by fire during the last half century must have been enormous. There is ample space almost everywhere in the old and second growth stands, those from 100 to 350 years old, for twice the present volume of timber, and it would have been there but for fires.

An increase in density and extent of brush growth below the 7,300-foot level is here an unfailing consequence of fires. In the yellow-pine type of forest and in the woodland it grows to larger proportions, and here and there, where the timber has been totally destroyed, it forms patches of pure growth. Almost the entire basin of North Fork of Feather River, both wooded and forested, exhibits plain evidence of having been overrun by fires, chiefly within comparatively recent times. It is estimated that out of a total of 422,900 acres, woodland and forest, only 42,620 acres are wholly free from the marks of fire. The tracts that have escaped are such as, by reason of rocky or exceptionally wet environments, were surrounded by natural fire breaks. The severest and most extensive fires west of the river have burned in the region around Table Mountain, while east of the stream the area situated on and in proximity to Bucks Mountain has suffered in a high degree. The burned region west of the river corresponds exactly to the extent of the auriferous areas where mining has been carried on since 1850. The tracts are severely burned east of the river are not situated in a very rich mineral region, but connect directly with burned tracts adjoining the placer grounds east of Spanish Peak. On its face the evidence would seem to warrant the conclusion that the fires which have ravaged the basin most extensively followed in the steps of miners and prospectors of the early days. The correctness of this conclusion is further strengthened by the fact that the big burns throughout the country examined lie contiguous or very close to much of the richest mineral ground. South of the area in the North Fork Basin mentioned above, fires have left their marks almost everywhere, but the destruction has not been great, probably not over 5 per cent of the total volume of merchantable timber having been burned. Most of the very destructive fires occurred many years ago. Those of later years have not done much damage. Small fires burn every season in many portions of the basin, but are not permitted to spread very far. The most extensive fire within recent years in the yellow pine areas burned in the northern portion of French Creek Basin, killing much oak, but not many conifers. It is said that cattlemen set this fire in 1897 or 1898.

In the entire basin of Middle Fork of Feather River, (536,450 A.) there are less than 20,000 acres which show no marks of having been swept by fire. Of the fire-marked areas, 163,100 acres are classed as badly burned. The tracts not fire marked consist of wet, grassy glades, or of rocky slopes, which fires could not readily run; in some places, of old placer diggings. The same amount of damage has been done here as in the basin of North Fork of Feather River. The tracts that have suffered most are situated in the region around Dogwood Peak, in Onion Valley, on the northern slopes of Pilot Peak, and all through the upper portion of the Nelson Creek Basin. All of the region here mentioned abounds in wide stretches, slopes, and summits evenly covered with

the brush growth that comes after fire, and with very few trees remaining to break the monotony of the chaparral. In the lower portions of Mohawk Valley, northeast of Eureka Peak, and in the upper areas north of Haskell Peak, are extensive burns. They are situated on the backbone and slopes of points of spurs, the forest in the canyons on either side having escaped destruction. East of Mohawk Valley the timber on all the peaks and higher ridges has been badly burned. The summit of Penman Peak and the high ridges connecting it with Mount Jackson and Grizzly Peak have been nearly stripped of forest, and carry enormously dense brush growth in its stead. Along the higher slopes of the Grizzly Creek drainage basin are found thin stands of forest set in heavy brush, but in general the damage here has not been very extensive, owing to the prevalence of yellow pine as the leading species of trees in the forest. It is impossible to estimate accurately the quantity of timber consumed by fire in the central area of the Middle Fork Basin, but it can be stated that this region does not now carry over 35 per cent of the stand of timber it is capable of carrying, and that the deficiency is wholly due to forest fires, a great majority of which have occurred since 1850. In the eastern portion of the basin the forest is quite as uniformly fire-marked as in the central or western portions, but owing to the fire-resistant quality of the yellow pine, which here constitutes the largest percentage of the timber, the damage has not been great. The fires which have so extensively decimated the forest in the region under consideration are in most cases due to human agency. Possibly some have been caused by lightning, but lightning as an agency in the starting of forest fires is probably here, as elsewhere in the West, a convenient scapegoat upon which to throw the sins of the careless or maliciously inclined hunter, prospector, or sheepmen, to whose presence most of the fires can be ascribed. All of the fires that come under my personal observation in the central and eastern areas during the time that this examination was in progress had been set by sheepmen. The fires along the main divide of the Sierra, north of Beckwith Pass, found burning in July, followed exactly the movements and progress of the sheep camps. The same condition existed on the summits and slopes of Grizzly Mountains. Around Franklin Hill large tracts of chaparral and adjoining forest were burned during the summer and fall, and the burns were invariably in proximity to sheep camps. In former years prospectors and miners doubtless were responsible for many of the fires, but in late years sheepmen are the leading agents.

Much of the area in the South Fork of Feather River Basin is fire marked, and on nearly 20 per cent the forest is badly burned; that is, over 50 per cent of the timber on the tracts classed as badly burned has been destroyed.

None of the region included in this examination has been so extensively scorched by fire as the basin of North Fork of Yuba River. Some of the basins, as, for example, that of Middle Fork of

Feather River, show a relatively larger percentage of fire-marked forest, but none so large a proportion of badly burned. The forested areas and those covered with chaparral comprise 295,450 acres, of which 264,750 acres show distinct marks of having been visited by more or less severe fires within the life of the present forest. The area on which the forest has been badly burned - destroyed to the extent of 50 per cent and upward - comprises 131,500 acres, or very nearly 50 per cent of the fire-marked tracts. East of Canyon Creek, beginning with the Shasta-fir forest, come the great burns of the basin. Throughout all of the central and upper areas of Slate and Canyon Creek, Goodyears Creek, and eastward to a line drawn south from Church Meadows to the junction of South Fork of North Fork of Yuba River and Milton Creek, the entire region is dotted with great tracts of burned forest. These burns are a direct continuation of the burned areas in the basins of the North and Middle Forks of Feather River, and follow closely the course of the high granite uplift cutting through the region from northwest to southeast. On many large areas the forest has been entirely wiped out, in others only partially burned. Where the destruction has been complete it is impossible to state with any degree of accuracy the amount of forest destroyed, but the assumption that the heaviest forest grew on the tracts where the fiercest fires raged has, at least, a fair degree of reason for its acceptance. If such has been the case then fire has wiped out, since the American occupation of California, at least 90 per cent of the timber at that time standing in these districts. Several chaparral hillsides near Lexington were burned over during the past summer, the fires presumably spreading south from tracts fired by sheepmen on the ridges between Middle and South Fork of Feather River Canyons.

The Middle Fork of Yuba Basin is fire marked throughout nearly all of its forest-covered tracts, as well as in the woodland sections. The only districts which have escaped are rocky slopes, wet glades, and the small areas near Pinoli and Findley Peaks carrying the remarkably heavy stands of pure growth Shasta fir, alluded to in the description of the grades of timber. The fires have not been nearly so destructive as in the adjoining North Fork of Yuba drainage, the great burns of this end of the Feather River basins having decreased in intensity and destructive force along the north bank of the Middle Fork of Yuba Canyon. Around Forest Hill, Mountain House, Alleghany, and generally throughout that neighborhood, the destruction varies from 80 to 100 per cent. The hillsides have been swept bare over large tracts, and are now covered with chaparral. South of the Middle Fork Canyon the region of the yellow-pine forest is fire marked and damaged very much as in the corresponding areas north of the river, to a point just beyond Bloomfield. From here on, eastward to Shands, the timber is composed largely of white fir, probably to the extent of 60 per cent, and long swaths have been burned in all directions through these stands of low fire-resisting capacity. Most of the

fires which have burned here are of recent origin, while those north of the river date back to the early mining days. The origin of the older fires is involved in more or less doubt. Probably prospectors and miners are responsible for many; not unlikely sheepmen burned the forest in the early days of their occupancy, just as they now do, only on a larger scale. Fires observed last summer eating into the very heavy stands of Shasta fir in the region of Pinoli and Findley Peaks had, in every instance, a sheep camp for their center.

Most of the forested as well as the woodland areas in the basin of the South Fork of Yuba River are marked by fire and a large acreage is badly burned.

In some places fires swept the forest soon after it was logged, here and there consuming the young growth and creating small chaparral-covered areas. Near Maybert large tracts of burned forest begin to make their appearance. They coincide closely with the western limits of the Shasta-fir forest in the basin and stand in direct connection with the big burns of Middle and North Fork of Yuba River districts. The timber in this section of the basin has been very badly damaged, at least 65 per cent having been consumed. The rocky areas west of Summit City show burns in nearly every one of the larger blocks of timber. As they usually stand isolated, fires must have been set in each separate block. From Summit City east to the main divide, including all the areas south of the river in the eastern portion of the basin, fires have run through nearly all of the forest. Small tracts in the wet canyons have escaped, but the total area of such places does not amount to more than 2,000 or 3,000 acres. The loss of timber by fires amounts at least to 20 per cent for the entire basin, while in the eastern portion alone 65 per cent has been destroyed.

Fires have been quite as widespread in the North Fork of American River drainage as in the Yuba or Feather River basins, but the damage has not been so great. The percentage of badly burned tracts, however, is rather larger, proportionally, while those upon which the destruction of the timber has been total are less. From the western limits of the forested regions to Emigrant Gap the traces of fire are more obvious. Partly or wholly dead timber seared by fires and the brush growths following in their wake exist in every canyon and on every ridge. The region has been logged and the damage done can only be approximated; probably 20 per cent is under rather than over. The region showing the most extensive devastations by fire begins on the western slopes leading up to Monumental Hill and continues to the head of the basin. Every slope and canyon radiating from the group of ridges of which that point forms the culmination, has been visited by fire. At the lower elevations, where the yellow-pine type is the prevailing forest, the damage has been largely confined to the red and white firs, amounting to 15 or 20 per cent. At the higher altitudes, where the Shasta fir constituted the chief tree in the stands, the

damage is fully 80 per cent, except in a few small tracts east of the summit of Monumental Hill, which, from some cause, the fires did not reach. East of Monumental Hill the forest is burned to the extent of 75 per cent on all the ridges at the head of Granite Canyon, Big Valley, and in general everywhere in the watershed as far east as Onion Creek. The fires have raged alike in the Shasta-fir and yellow pine forest, here burning long lanes clear of timber, there destroying large blocks of forest, leaving behind isolated trees or small groups fire scarred or half consumed, and covering, as a sequel, ridge and slope with matted brush growths. At the head of the canyon the fires burned out the timber in spots here and there, and doubtless are responsible for the grassy tracts and thin, scattered stands of forest which characterize the slopes of the main range. South of the river at the head of the basin the fires have burned out patches of timber in the midst of heavy stands, thinning the forest in other localities, the damage amounting to 35 per cent. Thence westward there is a line of heavy burns following the main canyon. The fires ate their way through what originally has been a heavily forested tract along the upper slopes of the canyon, completely burning up wide blocks of timber and greatly thinning what they did not wholly destroy; the damage has been about 30 per cent. Nearly the entire extent of forest and woodland area in the basins of Middle Fork of American and Rubicon Rivers is fire marked and a large percentage is badly burned. The probability is that no portion of the basins has been wholly exempt from fire during the past fifty or sixty years. In the area west of the main range at the head of the northern tributaries of Rubicon River, the Shasta-fir forest shows broad streaks of burned timber on all sides. The ridges bounding Powderhorn Creek on the east, the spurs radiating from Mount Mildred, and the tracts between Grayhorse Valley and Big Meadow have been burned over several times within the past thirty or forty years. Fully 60 per cent of the forest has been destroyed and in its place ridge and canyon bottom have become covered with thick growths of underbrush. The fires have burned their way southward into Rubicon Canyon, stripping the southern slopes of broad blocks of forest, burning long lanes nearly clear of timber, and thinning the remaining stands. As elsewhere, brush has followed as a sequel to the destruction of the timber. At the highest elevations along the main range, stretches of ground formerly forested have become covered with grass, but such tracts are insignificant compared with the large areas which are brush-covered. In all portions of the Long Canyon drainage there are big stretches of badly burned forest. Between Big Meadow and French Meadows 60 to 70 per cent of the timber has been destroyed, and the underbrush has, in consequence, become so dense that no living thing larger than a mouse can make its way through it. In the valley of Long Canyon 20 to 30 per cent of the timber has been destroyed. The former heavy stands of large incense cedar and sugar pine around Big Meadow are now chiefly remarkable for the great number of

hollow trees which they contain - the work of successive fires. Down the Long Valley Canyon from Big Meadow, 20 to 40 per cent of the red fir has been destroyed, and fully as much of the white fir, while both sugar and yellow pine have suffered severely. Everywhere the undergrowth, where the timber has not been wholly destroyed, has more than quadrupled in density, while on some of the southern slopes, like the ridges between Long Canyon and Rubicon River, soil aridity has followed to such an extent that the chaparral is scarcely able to obtain a foothold. All the areas around French Meadows tell the same tale and show the same picture of scattered broken stands of timber set in dense undergrowth, or separated by lanes of chaparral. All the way down the main canyon of the Middle Fork of American River there is a succession of these fire glades, alternating with heavy stands which serve to indicate the former density of the forest. All the slopes of Duncan Canyon from its head down show the same marks of fire - dead timber, dense undergrowth, stretches of chaparral, thin lines of trees or small groups rising out of the brush, and heavy blocks of forest surrounded by chaparral. North of Duncan Peak and connecting with the burns on the northern slopes of North Fork of American River Canyon the forest has been burned out in narrow lanes and patches. In some places brush has replaced the timber, in other localities the ground has been too rocky, soil aridity has set in, and low shrubs or coarse weeds thinly cover the ground.

1904 - The boundary report by H. R. Porter, Jr. on the area between the San Jacinto Reserve and the Mexican Boundary states:

"The whole area is covered with chaparral and subject to overgrazing and fires. The signs of fire having gone thru the brush are constantly evident, and smoke can usually be seen. Cattle, sheep and goat grazing is carried on to the limit of the range and more. The men riding the range freely acknowledge that burning for the purpose of improving the range has been carried to such an extent as to have very decidedly injured it."

"The Southern California Mountain Water Company graze and burn their watershed in order to permit the water to run into the Otay dam."

Incidentally, due to cultivation, overgrazing and fire, the reservoirs in San Diego County are rapidly filling with silt.

1904 - The following extract from a Plumas Boundary Report of 1904 is an excellent description of the fire situation 30 years and more ago.

From the beginning of the dry summer season, in June, till its close in October, the smoke of forest fires is always to be seen.

The common type, and in fact almost the only type, of fire in the forest is a light surface burn that at first sight seems to do little damage. On closer examination it becomes apparent that almost all localities in the entire region have been repeatedly burned over by these mild fires. It is because of this frequent consumption of forest debris that large accumulations, sufficient to furnish food for fierce fires, are seldom met with.

The people of the region regard forest fires with careless indifference. Timber has been, until within a few years, of little value. Everyone has plenty for his own needs. To the casual observer, and even to shrewd men, who do not realize that the prosperity of a country may depend upon its capacity to grow timber, the fires seem to do little damage. The Indians were accustomed to burning the forest over long before the white men came, the object being to improve the hunting by keeping down the undergrowth, which would otherwise shelter the game. The white man has come to think that fire is a part of the forest, and a beneficial part at that. All classes share in this view, and all set fires, sheepmen and cattle-men on the open range, miners, lumbermen, ranchmen, sportsmen, and campers. Only when other property is likely to be endangered does the resident of or the visitor to the mountains become careful about fires, and seldom even then. When fires are deliberately set, it is usually to clear away chaparral or thickets of young trees, so that sheep or cattle may range more freely.

The light surface fire in its repeated visits to the forest, has produced the following results:

Destroyed a large part of the reproduction on which the future of the forest depends.

Damaged a majority of the mature timber trees. (This injury is most apparent in defective butts, but is most serious in its effects on the normal stand.)

Persistent destruction of young growth, and more gradual, but equally sure, thinning of the mature stand has produced an open forest of low limbed trees.

Another injury is the extension of chaparral in the forest.

Above elevations of 4000 feet brush patches begin to become noticeable to the forester. At first they are little, insignificant bunches in openings in the forest. The species most noticeable are Arctostaphylos patula and a thorny ceanothus, scientific name unknown. As the elevations increase, the brush patches become denser, more extensive, and more frequent. The thorny ceanothus is displaced by Ceanothus velutinus and Castanopsis sempervirens. The abrupt tran-

sition from forest to chaparral is often remarkable. At other times the change is so gradual that all the steps are plainly shown. Fire is the agent which firmly fixes this worse than worthless mass of brush upon good forest soil.

One or more of the species which form the chaparral are present in all parts of the forest except where perfect crown cover has been maintained for many years, and this ideal forest condition is seldom found. The chaparral species being ever-present, promptly take advantage of the hindrance which the fire interposes to the reproduction of the tree species. The critical point of difference between the brush and the young trees is that the trees are totally killed by fires, which merely deaden the tops of the chaparral so that it sprouts again. Each succeeding fire burns the humus from the soil, and renders it more unfit for the production of coniferous seedlings. Gradually the mature trees, which have been burned more deeply at the butt by each succeeding fire, fall and are consumed.

The chaparral seeds freely, and the seeds are well adapted to withstand the intense heat and consequent dryness of the California summer. The coniferous tree seeds and seedlings of the timber species require moderate shade and more soil moisture.

Each fire fastens the chaparral more irremovable in its place. Even the very exceptional fire, which kills out some of the roots, only makes the soil more shadeless and sterile and the chance of establishing tree species more hopeless.

#### What the Surveyors said about Brush

"The following item by Ranger Box in the Lassen Eruption is so pertinent that I call it to the attention of all field men in the District. The next time some 'old timer' tells you about the 'open woods' in his boyhood days, get out your field notes and check up on him. You will find that as a rule his story will not hold water.

"We field men are often placed on the defensive in arguments over our policy of fire protection, and one of the favorite broadsides hurled at us is that 'when I was a boy 40 years ago one could ride anywhere through these woods and see a deer or a cow half a mile through the open timber and there was no brush or little pines like we have now as we kept it burned off clean, etc., etc.' I have found that we can make some of these old birds sit up and take notice and admit that their argument will not hold water in all cases, if a few notes copied from the field notes of the original survey where the old surveyor

in 1878 or 1881 noted 'heavy undergrowth of pine, cedar, fir, chapparal, etc. are produced.'"

#### Gun Wadding Caused Many Early Fires

Do you old timers of the muzzle-loader-shot-gun period remember when you were a boy you would sneak out the old shot gun and go hunting? You had used your few dimes and nickels - there were no pennies then - to buy powder and shot, but wadding - you could not spend good money for it - consisted of paper or rags. Do you remember that sometimes you could see the wadding burning after it had left the muzzle of the gun, provided the gun did not kick too hard? Do you ever wonder now how many fires were caused in those days by "wadding from sportsmen's guns"? We probably will never know, but an item here and there in old newspapers and occasional mention of such occurrences in the reports and diaries of early friends of the forest show that the shot gun wad was one of the main causes of early forest fires. One newspaper, dated October 30, 1869, says: "A fire started by the discharge of a shot gun travelled 40 miles most of the way through heavy timber, consuming, of course, all fences and even houses and sawmills in its path." Another article dated as late as 1897 indicates that the "wadding from some sportsman's gun" was still a very busy destructive agent. The toll of wadding of the muzzle-loaders during the long period of their use in California must have been enormous. And the Indians had none of these "fire setters" before the days of the white man.

#### "White Man Burned the Timber"

"During the summer of 1907, while camped at Groves Prairie, an old Indian - 'Friday' of Willow Creek - came there for his annual hunt. Friday was a New River Indian and was a friend of the 'Whites' during the Indian wars on the Trinity River. He spoke good English and was not afraid to talk.

"The Groves Prairie country had been the scene of many disastrous fires, and there hundreds of acres of fire-killed timber still stand.

"Friday sat around the camp and told me about his early life--how his father used to hunt elk, dress in elk skins and shoot with bow and arrows; how they used to carry fire while traveling, and sometimes had to stop during the day and burn coals to carry farther. I finally asked him about some of the burned areas and intimated that the Indians must have done considerable burning. At this he rose up, looked straight at me and said, 'Injun never burn trees and kill timber - white man burn 'em.' -- Trinitarian."

March 3

Information obtained from the Chief of the Mewuk Tribe

The Mewuk Tribe were taught to be careful with fire and were careful not to let it escape. They would, however, burn the brush and undergrowth along the routes they traveled to prevent bear from hiding along such routes and to prevent enemies from ambushing them. They would also burn around the oaks and nut pines to make acorns and nuts easier to gather. They did not set fires to repel enemies. Practically all the fires set were for the purposes mentioned above, but they were set when they would not spread and get beyond control and they were not set broadcast as it is sometimes said they were set by Indians before the whites came. To prevent the spread of fires practically all fires were set early in the spring or in the fall after the first rains. All areas burned were limited to their own territory and this territory was in the immediate vicinity of the villages occupied by the Indian. All burning was limited to certain Indians who were looked up to as leaders or who understood how it should be handled. The Mewuk did not understand the use of torches but all fires were set by using the drill.

## The Record of Individual Fires in California

From 1793 to 1905

(Where possible to do so the County in which the fire occurred, and the year the fire occurred, are shown. Since many files of the San Francisco papers were missing from the libraries (probably due to the earthquake and fire) the record for some years is limited.)

### Early Day Fires

#### 245 to 1797 - Fresno

From the scars on a Sequoia cut in the Kings River Grove by the Sanger Lumber Co. it was found that severe forest fires burned during the years 245, 1441, 1580, 1797. The total age of the tree was 2171 years. The oldest tree measured there was 2425 years old. Measured by Prof. W. R. Dudley of Stanford University.

#### Eldorado

1767 - From fire scars on a Jeffery pine cut south of Lake Tahoe it was determined that a severe fire burned there in 1763.

1786 - From fire scars on a Jeffery pine cut south of Lake Tahoe it was found that a severe fire burned there in 1786.

1837 - From fire scars on a Jeffery pine cut south of Lake Tahoe it was found that a severe fire burned there in 1837.

#### 1793 - Lower California

Forest Fire in Southern California Described by Famous Navigator:

Vancouver in his "Voyage of Discovery to the Pacific Ocean and Round the World" London, 1798, describes a spectacular fire that occurred December 10-11, 1793, on the coast of California just below the present Mexican border.

To quote Vancouver: "During the forenoon immense columns of smoke were seen to arise from the shore in different parts which towards noon obscured the shores. These clouds of smoke containing ashes and dust soon enveloped the whole coast. The easterly wind prevailing brought with it from the shore vast volumes of this noxious matter, not only very uncomfortable to our feelings, but

adverse to our pursuit, as it entirely hid from our view every object at the distance of a hundred feet. Two opinions had arisen as to the cause of the very disagreeable clouds of smoke, ashes and dust. Volcanic eruption was naturally the first conjecture, but after some little time the opinion changed to the fire being superficial in different parts of the country.

"Next day large columns of smoke were still seen rising from the Vallies behind the hills. To the south of us the shore exhibited manifest proofs of its fatal effects, for burnt tufts of grass, weeds and shrubs, being the only vegetable productions, were distinguished over the whole face of the country, as far as with assistance of our glasses, we were enabled to discern.

"Under these circumstances it cannot be a matter of surprise that the country should present a desolate and melancholy appearance."

The most striking fact seems to be the late date of the fire.

#### 1823 - Santa Barbara

Was this one of those beneficial Indian fires?

In his book, "Two Years Before the Mast," Richard Henry Dana relates his adventures on a voyage from Boston to California, during the years 1834-36. Speaking of the city of Santa Barbara he says:

"--The town is finely situated, with a bay in front and an amphitheatre of hills behind. The only thing which diminished its beauty is that the hills have no large trees upon them, they having been all burnt by a great fire which swept them off about a dozen years ago, and they had not grown again. The fire was described to me by an inhabitant, as having been a very terrible and magnificent sight. The air of the whole valley was so heated that the people were obliged to leave town and take up their quarters for several days on the beach."

Dana was in this locality in 1835, which places the time of the fire about the year 1823.

## Fires Since the Gold Seekers Came

### 1848 - Shasta

And these weren't Indian fires.

From "Six months in the Gold Mines", 1847-8-9, by E. Gould Buffum, Lt. 1st Regt. N. Y. Volunteers. Published 1850, by Lea & Blanchard, Philadelphia:

P. 31. "We continued our progress up the river (Sacramento) occasionally stopping and amusing ourselves by firing the woods on either side, and watching the broad flames as they spread and crackled through the underbrush." October, 1848

### 1852 - San Joaquin

Fire menace - a bogey of early days.

"Dread of the blighting touch of the fire fiend in the tiny village of Stockton in the early '50s was constant. Fires sweeping the ranches along the Calaveras River in the early winter of 1852, while a brisk norther raged, stuck terror to the very souls of Stockton citizens. It made an awe-inspiring spectacle that attracted by its very menace.

"While one of the most violent windstorms the early settlers had experienced since the winter of 1849 swept over the land, flames swirled over the landscape east of the city in a great arc that cut the horizon from north to south.

"Started on the ranch of D. W. Perley, the blaze gained in momentum as it was impelled by the violent wind. It was thought that the fire had been started at the whim of an incendiary and all efforts to save the attractive ranch house near the Calaveras River were of no avail. The barn and a 200-ton hay crop, valued at that date at \$6,000, were a total loss.

"The fire spread to the Barnett ranch, where 100 tons of hay were consumed; the Wells ranch, where another 100 tons of hay were destroyed, and the Old ranch, which suffered the loss of a house and entire stock of hay. Hay quoted at \$30 a ton was worth money in those days when horses and mules worked hard and demanded real food and care.

"The wind whined and shrieked and recalled disasters at sea to those who had voyaged about the temperamental Cape Horn, so realistic was the distant fire in its likeness to storms on the deep. Great clouds of smoke rose in billows that glowed and glowered in the reflection of the flames. Blazing fingers licked at the heavens. Strange coppery lights filled the air and added to the feeling of distrust in the hearts of the onlookers.

"Bit by bit the news trickled in from the destroyed area and each new account of a lost farmhouse, or a barn with teeming crops and puffy haystacks consumed, brought fresh terror. All night long guards paced up and down the primitive streets in ceaseless dread of what might be forthcoming. Calamity filled the air, and small groups whispered together exchanging, 'remember' of other tragedies, attempting to bolster their courage with tales of greater catastrophes. Firing of firecrackers was forbidden in the unsettled season of the '50s. Whether it was a precaution taken to forestall a general conflagration or directed against the wily Celestial who delighted in noise-making devices was not chronicled." -- Inez Henderson Pond in Stockton Record.

#### 1853 - California

Bangor, Me., Daily Whig and Courier, Aug. 12, 1853: The summer fires have been doing much damage in the mountains and valleys, and large quantities of grain have been destroyed.

#### 1859 - Marin County

Fire in Mt. Tamalpais burned for 3 months. - S. F. Chronicle, Sept. 19, 1881.

#### 1860 to 1890

Newspaper reports of hundreds of fires in California from 1860 to 1890 - 45 to 75 years ago - show enormous property damage and many lives lost. Worse fires than any of recent years.

#### 1860 - San Mateo County

Republican Farmer, Aug. 10, 1860: A destructive fire has occurred in San Mateo County, burning over a large tract of grain fields.

#### 1868 - Marin County

San Rafael woods on fire. San Francisco covered with smoke.  
--S. F. Chronicle.

1868 - Marin County

Bangor, Me., Daily Whig and Courier, Sept. 21, 1868: The woods near San Rafael in Marin County are on fire. A tract of 5 to 6 miles in extent is burning, and the inhabitants are nearly stifled with smoke. The city of San Francisco and harbor were wrapped in a dense cloud of smoke last evening which is supposed to have come from burning woods.

1869 - October 6 - Monterey to San Diego Counties

A fire is raging in the timberland on the Coast Range of the mountains from Monterey to San Diego. Over \$10,000 worth of orange trees have been destroyed in Santa Barbara County. -- Providence Daily Journal, Oct. 7, 1869.

1869 - October 25 - Southern California

Big fires are reported to be raging on the Coast Range of mountains in Southern California. --Hartford Daily Courant, Oct. 25, 1869.

1869 - Santa Cruz County

A fire has been raging in Santa Cruz County for some days, reported to have originated by hunters to drive game. Great forests of California are periodically burned over. Most of these fires are wholly unnecessary, some result from carelessness but more from design. The damages are immense. All the undergrowth is destroyed and most of the timber." Often forests are set on fire to drive deer into the open country and valleys below. Camp fires are left burning and the fires once getting into the woods may run until some canon or stream arrests its progress. A fire started by the discharge of a shot-gun has been known to extend 40 miles most of the way through heavy timber, consuming of course all fences and even houses and sawmills in its path. -- Bangor Daily Whig and Courier, Oct. 30, 1869

1869 - Fires raging in Coast Range from Monterey to San Diego.

-- S.F. Chronicle

1869 - Big fire in Santa Cruz County - set by hunters.

-- S.F. Chronicle

1871 - Riverside - Effects of Fire on Chaparral

Mr. Charles Thomas, whose ranch is in the San Jacinto Reserve, near the Hemet Dam, a resident here since 1861, says:

"In the surrounding country there was no such thing as an arroyo, gully or 'wash' until 1871, at which time there

were several severe fires. Now it is badly gullied and there are extensive washes." There was no wash in the bed of the San Jacinto River, down which he used to ride and drive cattle. Now the "wash" or bed of the river is higher than the town of San Jacinto and a bridge built a few years ago with 8 feet clear of the water now only has 1 foot 6 inches clear of the stone and gravel of the "wash." For 30 years no dry season had any effect on his water supply for domestic purposes, stock and irrigation. Since the heavy grazing of the last 10 years, each summer it is greatly reduced, being in fact hardly sufficient, and all wet ground, or "Cienegas" dry up each summer now. It takes 20 to 25 years for heavy chaparral to get back to former density and size after a severe fire. -- From the Boundary files of 1902.

#### 1871 - Siskiyou

Editorial from Yreka Union of July 22, 1871:

"A very heavy fire has been burning for some weeks past in the Humbug Mountains west of town. During the week the fire has come over the summits and has been burning on this side the way. We learn that a fire is raging over a wide extent of country on the north side of the Klamath River along Empire and Dutch Creeks. These fires, which in their annual ravages are so destructive to timber, result from criminal negligence or something worse. Severe penalties should be visited on persons who set fires in the woods either intentionally or through carelessness."

#### 1871 - Nevada County

Fires are doing immense damage in the Cascade Mountains, Nevada County. The fires are of frequent occurrence. --Hartford Courant, July 24, 1871.

#### 1871 - Northern California

Immense fires are raging in the woods in northern California and Oregon. --Hartford Courant, Sept. 13, 1871.

Immense fires are raging in the woods in northern California and in Oregon. --New York Tribune, Sept. 13, 1871.

#### 1871 - Santa Barbara

"The fire that has raged along the mountains in Montecito for several days is out. It shot the tempera-

ture from 60 degrees to over 100. W. W. Haynes saved his house, Col. Dinsmore lost some hay, and Mr. Bond heroically made a dash to the Hot Springs House to warn the occupants. The Hot Springs House and all buildings were destroyed." -- Santa Barbara News, October 9, 1871.

"It is generally believed Santa Cruz Island is on fire. There is a great smoke out that way. If so the cattle will perish, many improvements will be destroyed and it will be altogether most deplorable." -- Santa Barbara News, October 10, 1871.

#### 1871 - California

Fires prevail in the mountains the whole length of California. -- New York Tribune, Oct. 16, 1871.

#### 1871 - Santa Cruz County

Oct. 19 - A fire broke out in Santa Cruz County on the Watsonville Road and burned over a distance 9 by 4 miles, causing great destruction to ranch property. Seven of the surveying party were burned. -- New York Times, Oct. 21, 1871.

Fire in Santa Cruz County covered area 9 x 4 miles. Great damage to ranch property. -- S. F. Chronicle, Oct. 19, 1871.

#### 1871 - California

Extensive fires continue in the Coast Range of mountains of California from Los Angeles County northward. -- Bangor Daily Whig & Courier, Oct. 27, 1871.

#### 1872 - Siskiyou

An early post card fire report states that 102,500 acres of timberland fire burned over 308,500 feet of timber causing damage estimated at \$462,750. The fire was started by "China men." The date of the fire is recorded as August, 1872, and the fire burned for 80 days. The post office was Seiad Valley, Calif., Siskiyou County, and the card is signed W. T. Grider.

Fire near Seiad on Klamath River covered 102,500 acres.  
-- S. F. Chronicle

#### 1872 - Shasta

150,000 acre fire on Pitt River. Destroyed  $1\frac{1}{2}$  billion feet of timber. -- S. F. Chronicle

In the summer and fall of 1872 a fire swept 150,000 acres of timberlands on the north slope of Pitt River, as far east as the

divide between Pitt River and Squaw Creek, the entire Squaw Creek drainage and the lower McCloud River as far north as Chatterdown Creek. This fire destroyed about a billion and a half feet of timber, being most of the standing timber on the area. --Mammett's notes.

#### 1873 - Trinity

A terrific fire has been raging on Trinity Mountain, 25 miles north of Shasta, for a week past and destroying a great amount of timber. It extends for miles each side of the telegraph road, injuring the Western Union line considerably, repairs being required daily. The road is dangerous for the passage of freight trains, and there is a dense smoke over all the country making the atmosphere oppressive and hot. The fire is still raging. -- Denver Daily Rocky Mountain News, Aug. 23, 1873.

Terrific fire in Trinity and Shasta Counties. -- S.F. Chronicle.

#### 1874 - Riverside County

September 29 - When the Julian Stage arrived (in San Diego) this evening it reported extensive forest fires raging in the canyon between Sweetwater and Vallevista, Riverside County. The settlers were all out fighting fire. The line of fire was nearly a mile long with a strong east wind. -- S. F. Chronicle, Sept. 30.

#### 1875 - Sonoma County

June 11 - The Russian River Flag says: The fires raging in the woods a few miles west of Healdsburg were supposed to be under control but a high wind started them afresh and for several days they have swept over the country more fiercely than ever. The people living along lower Dry Creek and across the country to Mortons Mill turned out en masse and fought the flames day and night. The district burned over is about 10 miles long and 2 miles wide. Four bridges were burned on Mill Creek. This is the worst fire which has visited this region for many years. -- S. F. Chronicle, June 12.

Fire near Healdsburg covered 20 square miles. --S.F. Chronicle.

#### 1875 - Marin County

June 12 - Fires raged in the "Redwoods" and the air was filled with smoke. From 100,000 to 150,000 feet of logs and a large amount of felled timber for cordwood was consumed. --S.F. Chronicle, June 13.

#### 1875 - Nevada County

August 25 - The forest fire which is raging in this vicinity (Floreston) burned the ice house of the Rocky Run Ice Co. The building

was 300 feet long by 50 feet wide but contained only 60 carloads of ice. -- S.F. Chronicle, August 26.

#### 1876 - Tuolumne County

Late in the summer of 1876 a fire burned over an area of about 2000 acres of forest land. It started where the trail from Confidence to the Basin Mine crosses the North Fork of Tuolumne River. It was caused by a man burning brush. -- Edward Janess.

#### 1877 - Santa Clara and Santa Cruz Counties

June 10 - Fires which have been raging in the Santa Cruz Mountains west of San Jose during the past week have resulted in the destruction of a vast amount of valuable timber. In some of the canyons the fire spread with such rapidity that the woodchoppers had to flee for their lives, leaving all their household goods to be consumed. On the eleventh a fire broke out in Alameda Canyon and in the course of the day destroyed 4000 cords of wood and many trees. The fires are still raging. -- S.F. Examiner, June 11.

#### 1877 - Los Angeles County

The fire in the Cahuenga range which has been burning since Saturday was at the last report still in full force and was fast approaching Monte Vista the beautiful place of Judge Lindsey. ... Every available person is at work trying to subdue the flames .... It is rumored that seven or eight homes beside barns and other property have been destroyed .... The fire started by a person who took this means of clearing his land .... We elsewhere note the report of total destruction of two apiaries. -- L. A. Hearld, S.F. Examiner, June 13, 1877.

June 11 - An immense fire is raging in the mountains between Los Angeles and Santa Monica and has burned over 1000 acres destroying a number of dwelling houses. Between four and six miles are now on fire and the residents are exhausted and discouraged. -- S.F. Chronicle, June 12.

#### 1877 - Santa Barbara County

June 12 - About noon on the 10th instant a fire broke out on Don Jose Rochins' ranch six miles southwest of this place (Lompoc). Raging fearfully in an easterly direction it ran consuming stock and everything in its path .... After burning 150 head of cattle for Don Jose Rochins and completely making away with all the grass on three ranchos it came down into Santa Margarita Canyon where, were it not for the noble citizens who fought it .... for fifteen hours straight .... it would undoubtedly have burned up every house in the canyon and perhaps there are families who would have perished.

There is a fire burning on the Santa Maria Ranch .... which has devoured 2000 acres of grass which was sowed to winter sheep on ....

A fire has been raging for three days in the Cahuenga Canyon about fourteen miles from Los Angeles near Monte Vista ... It is said two or three houses burned and lots of hay have fallen prey to the flames. 200 stands of bees have been destroyed ... The extent of the fire is between eight and ten miles and it is still raging. The settlers have been making an ineffectual fight against the fires since Saturday .... -- S.F. Examiner, June 13.

1877 - Placer County

August 12 - At 3:30 this afternoon a timber fire was started on Mrs. Simmons' ranch two miles from town by the burning wadding of the guns of a crowd of boys who were hunting .... Many miners and ranchers started for the scene .... The flames spread rapidly through timber and underbrush .... The mill of Mr. Partridge's Oak Grove mine was in danger .... Mr. Taylor .... reports flames are very fierce and the ranches of Slaven, McKewen, Dingman and Bartholomew are in great danger of being overrun .... About 200 miners and ranchmen are now fighting the flames .... Much valuable timber has been destroyed; over 5000 cords of wood are in the direct line of the fire. At the hour of writing the burned area is about three miles long by nearly one mile wide and the fire is still raging fiercely. Another fire has just broken out back of Hungerfield three miles northeast of Placerville and great loss of property is feared. -- S.F. Examiner, August 13.

1877 - Eldorado County

August 12 - A timber fire started 2 miles from Placerville by the burning of wadding from a gun used by a crowd of boys who were hunting. Many miners and ranchmen have started for the scene. The flames spread rapidly through the timber and underbrush. About 200 miners and ranchmen are fighting the flames. Over 1000 acres have been burned over. The burned area is about 3 miles long and nearly 1 mile wide. Great loss of property is reported.

-- S.F. Chronicle, August 13.

1877 - San Mateo County

September 18 - The great fire which has been raging in the redwoods of San Mateo County has spread over nearly 8 square miles of territory. On this date the fire has nearly exhausted its fury. The fire was the result of carelessness on the part of some pot hunters who had been out slaughtering quail and rabbits.

-- S.F. Chronicle, September 18.

1878 to 1906 - Siskiyou

From S. B. Show's report - "O - Shasta, Fire Co-operation; Forest Residents" - of August 8, 1916:

"The history of the country, as well as the evidence on the ground, shows that about forty years ago the entire region supported a fairly good stand of timber; not of the highest quality, but probably comparable to that of the Sacramento canyon. A heavy fire in about 1878, which covered the entire region, followed by numerous smaller fires, set out by various persons, a second heavy fire about 1898, and another series of small fires up to about 1906, when the area was included in the Forest, have wiped out the original stand of timber except for narrow strips along streams and ridges and scattered groups and isolated individuals elsewhere. As the timber vanished, brush increased, till at the present time it covers practically 100% of the area. The existing trees, then, have no merchantable value. They will, however, seed in considerable portions of the country, if fire is kept out, although probably 40% will have to be reforested artificially, if at all."

1878 - Los Angeles County

September 10 - At 2 o'clock P.M. on Monday some brush caught fire in San Fernando Valley and it was feared the grain fields of Messrs. Lankershim and Van Nuys would ignite but 70 men turned out and after a hard fight turned the flames in another direction. The brush is still burning fiercely in range north of Tejunga Pass. -- S.F. Examiner, September 11, 1878

September 11 - A forest fire started on the San Pascual ranch about 3 miles from Pasadena. Some 39 acres had been cleared up and was thoughtlessly set on fire. Everything was as dry as tinder and the flames spread with rapidity. Upwards of 1000 acres of land was burned over. Fences were destroyed and 5 canyons were desolated involving great loss to the bee industry. An apiary including 200 stands of bees burned to ashes. A tongue of flames could be seen licking its way up the San Gabriel range of mountains. The scene of the conflagration seemed not over a mile distant while it was 20 miles. -- S.F. Chronicle, September 12

1878 - Tuolumne County

Late in the fall of 1878 a fire burned over 3000 acres of forest near Cold Springs. It started about 3 miles west of Cold Springs and was caused by sheep herders. -- Edward Janess

1879 - Los Angeles County

June 3 - Great fires are raging west of this city (Los Angeles). A half dozen bee ranches have been destroyed and a large amount of hay. It is reported tonight that the fire has reached the great San Fernando Valley and that 6 men and a horse have perished in an attempt to protect the great grain fields of that vicinity. -- S.F. Chronicle, June 4

June 3 - Great fires are raging west of the city (Los Angeles) and half a dozen bee ranches have been destroyed and large amounts of hay. It is reported tonight to have reached the great San Fernando valley and that six men and one horse have perished in protecting the grain fields of Lankershun & Co. -- S.F. Examiner, June 4

1879 - Nevada and Placer Counties

June 23 - Two extensive fires have been raging for several days near Franktown (Nevada) and at the head of the Mecky and Fair flume. The woods are ruined from Lake Bigler (Lake Tahoe) to Reno.

--- S.F. Examiner, June 23, 1879

Santa Clara and

1879 - San Mateo County

August 2 - A fire is now raging on the hills in Santa Clara County south and west of Mayfield and Mountain View. The fire is steadily working its way north and east and seriously threatens the farms in the neighborhood of the above mentioned towns and also the southern end of San Mateo County. At the present the fire is confined to the chaparral and manzanita which covers the eastern slope of the mountains.... Citizens are already taking measures to start back fires as the fire is one of the largest ever known in the county.

-- S.F. Examiner, August 4, 1879

1879 - Amador County

August 2 - Extensive fires are raging in the chaparral near here (Ione) destroying miles of fences, numerous buildings and hundreds of acres of pastures. Great efforts have been made to fight the fire but it continues under full headway and has been increasing in fierceness for the past three days.... The fire is very near Ione and the citizens expect to be obliged to fight hard tonight to save the town. -- S.F. Examiner, August 4, 1879

1879 - Yuba County

August 4 - A forest fire started in the hills in the vicinity of Smartsville several days ago and is likely to prove an extensive loss of fences and wood. The fire is steadily working north and east toward French Corral (Nevada County). At the latest

advice citizens have started back fires in the vicinity of Anthony House to stay the ravages. -- S.F. Examiner, August 5, 1879

August 19 - The Marysville Appeal has the following: The fires in the foothills north of Yuba are still burning and on Wednesday were marching on toward Bangor (Butte Co.). The fires above Browns Valley and Scotch Ranch have burned over thousands of acres destroying much valuable government land and burned many miles of fence .... Much of the country burned over was heavily timbered and most of the trees are killed involving great loss.

-- S.F. Examiner, August 19, 1879

#### 1879 - Amador County

August 25 - The following is a list of the principal losses by the field fires which for two weeks have raged between here (Amador City) and Ione City .... (Note: 11 names listed.) The losers are small farmers who have been completely burned out.

-- S.F. Examiner, August 26, 1879

#### 1879 - San Diego County

October 28 - One of the greatest conflagrations ever known to the oldest inhabitant from 40 to 50 square miles of territory burned over in the vicinity of Sweetwater Valley in San Diego County. -- Monthly Weather Review

50 square miles of territory burned over in one San Diego County fire. -- S.F. Chronicle

#### 1879 - Stanislaus County

In the fall of 1879 about 5000 acres along the foothills in the eastern end of the county were burned from carelessness of campers. The fire continued for ten days. -- Report on Forestry, 1882 Vol. 3. Hough

#### 1880 - Lake County

10 square miles of timber remote from market was burned by fires caused principally by campers in Lake County between May and October 1880. If timber destroyed had been near market would have been worth perhaps half a million dollars. Some damage to prepared forest products and fences. -- E.C. Parker, p. 200, Vol. 3, Report on Forestry by Hough

#### 1880 - Calaveras County

One thousand acres were burned over in Calaveras County by fires, about the middle of June. Charged to carelessness of hunters.

The damage was to small timber and pasturage.

-- Report on Forestry 1882 - Hough Vol. 3 page 200

#### 1880 - Plumas County

Forest fires occurred to limited extent from about the middle of August to the first of October caused by the carelessness of Indians and may have burned over 10,000 acres in three separate places. About a fourth of the timber within the burned areas was killed.

-- M. Ball, p. 200 Report on Forestry by Hough

#### 1880 - Butte County

August 24 - A fire is raging in the woods near Arcada Mill, Chico. -- S.F. Bulletin, Aug. 24

#### 1880 - Nevada County

August 29 - Nevada City Gazette says a large fire has been raging in the woods. It started at Meyer's Ravine and is working its way towards Mooney's ranch and a large force of men are trying to stay its progress. -- S.F. Bulletin, August 30, 1880

#### 1880 - Yuba County

August 30 - A fire in the Yuba hills near Selby Flat has run over 600 acres of pasture and timber land. -- S.F. Bul. Aug. 31

#### 1880 - Shasta County

September 1 - Says the Shasta Courier: The big fire which last week swept over the country between the Fountain House and Texas Springs exterminated innumerable snakes, scorpions, toads, rabbits and other small animals. -- S.F. Bulletin, Sept. 2, 1880

September 2 - The great fire that has been raging between Shasta and Clear Creek for several weeks past still continues its ravages filling the atmosphere with dense smoke. Parties who are cutting wood on Clear Creek state that the fire is set out and kept going by parties whom they can not get sight of.

-- S.F. Bulletin, Sept. 2, 1880

#### 1880 - Mendocino County

September 6 - Several rattlesnakes were killed in Ukiah City during the past week. They were undoubtedly driven out of the mountains by the fires which have been raging there for some time. -- S.F. Bulletin, Sept. 6, 1880

1880 - San Bernardino County

September 11 - Mountain fires in the vicinity of San Bernardino.  
--- S.F. Bulletin, September 11, 1880

1880 - Nevada County

September 16 - A fire in the woods near Nevada City burned over considerable area last Saturday. --- S.F. Bulletin, Sept. 17

1880 - Fresno County

A number of fires occurred during the year in Fresno County during September and early October and usually were set by sheep owners to improve the pasturage or by Indians gathering nuts. They sometimes spread over considerable area. --- C. A. Davis, p. 200,  
Vol. 3 - Report on Forestry by Hough

1880 - Mendocino County

Considerable fires occurred from the middle of September to the first of November. They were set partly through carelessness of hunters and others and partly intentionally and were allowed to burn till they went out. The lumbermen in the redwood belt annually set fires to clean out the limbs, tops, bark and the broken trees and their splints, as well as to keep down the undergrowth. In the grazing belt fires are often set to burn the dense chaparrel on the hills. --- A. McGowan, p. 200, Vol. 3 - Report on Forestry by Hough.

1880 - Santa Clara County

A large fire is burning in the mountains above Saratoga on the Tin Can Ranch. Quantities of wood and tan bark have been destroyed and the fire still rages. --- S.F. Bulletin, Sept. 18, 1880

1880 - Butte County

September 22 - 2000 acres of valuable timber have been burned over near the Arcada Mills, Butte County by recent fires.  
--- S.F. Bulletin, Sept. 22, 1880

1880 - Siskiyou County

September - A forest fire burned the head of Jackson Creek, Scott Creek, Taylor Creek and South Russian Creek in Siskiyou County covering an area of about 30,000 acres. The fire was set by someone.  
--- Wm. Balfrey

### 1880 - San Diego County

10 square miles San Diego County. Damage half a million.  
-- S.F. Chronicle

### 1880 - San Mateo County

Fire covered 50 square miles San Mateo County. Damage \$80,000.  
-- S.F. Chronicle

Fires began about the first of November 1880. They ran over a distance 10 miles long and 5 miles wide and are said to have started from neglected camp fires or as some think from the burning of a tree that had fallen across the road. The damage could hardly be estimated but was at least \$80,000. -- Jas. S. Wallis, page 202, Vol. 3, Report on Forestry by Hough

### 1880 - Mono

Mammoth City, a mining camp in the Mammoth Lakes region (now Inyo Forest) burned with a loss of \$50,000. A forest fire broke out near Towle and the Central Pacific sent a force of 1,000 men to subdue it. -- Grizzly Bear

### 1880 - San Diego

A San Diego County forest fire had burned over ten square miles of the Santa Rosa Rancho, destroying an immense amount of feed. It was still burning at the end of the month. -- Grizzly Bear

### 1880 - Los Angeles

A big forest fire broke out near San Gabriel, Los Angeles County, October 16. To protect his domain, 'Lucky' Baldwin had 200 men fighting it. -- Grizzly Bear

### 1880 - Orange County

Practically the whole face of the Santa Ana range burned over.  
-- Report on Fire Conditions in the Trabuco Canyon, Forest Reserve by E. A. Sterling.

### 1880 - Mariposa County

Several forest fires occurred in this County which burned for several miles and destroyed to a great extent the standing pine timber.  
-- W. A. Grade, p. 200, Vol. 3, Report on Forestry by Hough.

### 1880 - California

Prior to the huge destruction of 1880 when 500 square miles were burned up in California these events caused little attention.  
-- New York Evening Sun, Aug. 8, 1908.

1880 - Siskiyou County

We have fires in the mountains every year generally starting through carelessness of hunters and travelers. They are allowed to burn for months or till the rains extinguish them. They sometimes run a distance of ten miles here and there across the summits and we may at times see 3 or 4 fires at a time after the first of August. There is very little attention paid to them unless they endanger the farms bordering the valley. The timber burned is of no present value; it might be to future generations. We have a law upon the subject of setting fires but it has no effect on careless hunters and enforcements.

--- W. J. Root, p. 201, Vol. 3, Report on Forestry  
by Hough.

Note: The San Francisco Examiner from 1880 to 1886 inclusive is not on file at the library in San Francisco.

1881 - San Joaquin

The first grain field fire of the season, started by a picnicker throwing a lighted cigar from a train window, burned over 600 acres of standing grain in San Joaquin County. --- Grizzly Bear

1881 - Merced

A grain field fire in Merced County, set by a spark from a passing locomotive, burned over 1,100 acres. --- Grizzly Bear

1881 - Sacramento County

Extensive fires have been raging along the American River for the past two days. Much damage has been done. The flames have spread and it is feared much wood will be destroyed.

--- S.F. Chronicle, July 13

1881 - Plumas County

The woods caught on fire southeast of Greenville Thursday and did considerable damage. --- S.F. Bulletin, July 5

1881 - Butte County

About 15,000 feet of fencing was destroyed by a fire in the woods near the King Ranch near Bangor, Butte County.

--- S.F. Bulletin, July 8

1881 - Sacramento County

Field fires are raging in Sacramento County, near the American River and are destroying grain, pasture and timber.

--- S.F. Bulletin, July 13

1881 - Amador County

Fire did considerable damage to the woods and several ranchers near Jackson, Amador County last week. -- S.F. Bulletin, July 21

1881 - Napa County

A fire burned over 200 or 300 acres of timber near Crystal Springs in Napa County. -- S.F. Bulletin, July 22

1881 - Tehama County

A very large fire -- in fact several large ones -- have been devastating a portion of the Coast Range Mountains in the neighborhood of the indentation between the north and south Yolo-Bally Peaks.

-- S.F. Bulletin, July 25

1881 - Siskiyou County

An extensive fire is raging in the woods at the foot of Forest House Mountain, Siskiyou County, on the Scott Valley side.

-- S.F. Bulletin, July 30

1881 - Marin County

Fire on Mt. Tamalpais and the neighboring gulches still rages although every available man that can be found has been pressed into the service to subdue it. -- S.F. Bulletin, August 2

1881 - Tuolumne County

The steam saw mill owned by B. F. Way, about 20 miles east of Sonora, was entirely destroyed by fire. The yard and all cabins were destroyed. (Note: This no doubt caused a forest fire.)

-- S.F. Bulletin, August 2

1881 - Placer County

A destructive fire raging in the foothills east of Lincoln, Placer County, for the past three days doing much damage.

-- S.F. Bulletin, August 3

1881 - San Bernardino County

Heavy fires are raging in the forests near San Bernardino Mountains and extending over into Bear Valley. A large amount of damage to timber is reported. -- S.F. Bulletin, August 8

1881 - Placer County

Last week in the foothills of Placer wood and grass fires raged in all directions, burning over miles of territory.

-- S.F. Bulletin, August 9

1881 - Calaveras County

Several destructive forest fires in the vicinity of Mokalumne Hill recently.

-- S.F. Bulletin, August 11

1881 - San Benito County

A fire started by careless hunters has been raging in the Gabilian Mountains, 15 miles south of Hollister for three or four days. It burned over 3000 acres of Government land.

-- S.F. Bulletin, August 15

1881 - Shasta County

Forest fires are raging in the mountains around Burney Valley and doing immense damage to the timber. One on Hatchet Creek has been burning for about 2 weeks. Another broke out over in the Big Ben Canyon and threatened the farmers in Goose Valley.

-- S.F. Bulletin, August 15

Extensive forest fires are raging in the mountains around Burney Valley and doing immense damage to timber. One at Hatchet Creek has been burning for about 2 weeks. -- S.F. Bulletin, Aug. 23

1881 - California

According to the August number of "The Grizzly Bear", California during August 1881 was a veritable "tierra del Fuego" (land of fire) and reports of conflagrations in some parts of the State were made daily. While many of the blazes were of small proportions, the more destructive ones were never before so numerous during any single month.

This statement does not tally exactly with the contentions of the "old timers" that there were no destructive fires in the days when the Indians and "light burners" were active.

-- Grizzly Bear

1881 - Mendocino County

Brush fires have been destroying fences north of Ukiah.

-- S.F. Bulletin, Sept. 1

1881 - Tehama County

Thursday evening a fire occurred on Antelope ridge 30 miles east of Red Bluff which destroyed between 400,000 and 500,000 feet of sugar pine lumber belonging to the Cal. Floor Co.

-- S.F. Bulletin, Sept. 3

1881 - San Bernardino County

Destructive fires in San Bernardino region still continue.

-- S.F. Bulletin, Sept. 6

1881 - Tehama County

A fire at the Yellow Jacket Mill in Tehama County burned 400,000 feet of sugar pine. -- S.F. Bulletin, Sept. 6

1881 - Tehama & Mendocino Counties

A big fire is raging in the woods between Low Gap and Prairie Camp. The smoke is stifling and travelers find the trip to the coast very uncomfortable. -- S.F. Bulletin, Sept. 13

1881 - Marin County

The fire in the woods near San Rafael excited some uneasiness in San Francisco. The wind blew dense clouds of smoke and ashes over the city. -- S.F. Chronicle, Sept. 15

1881 - Marin County

William Pixley, clearing his land in Mill Valley, September 14, 1881, set fire to a pile of brush. The flames got away from him, went up the side of Mt. Tamalpais, and did immense damage. It was estimated 65,000 acres were burned over. Pixley, when he saw that the fire was beyond control, dropped dead.

1881 - Marin County

A terrible fire is raging south of San Rafael lighting the whole heavens and attracting universal attention. It originated from burning brush. It soon spread beyond the control of the men and is raging over a large extent of country. A strong wind prevailed and it swept rapidly south destroying houses, hay stacks and everything combustible in its track. The fire has extended as far north as Kents deer park and the people are gathering from all the adjacent country to fight the flames. The line of fire is said to be at least 12 miles long. -- S.F. Chronicle, Sept. 15

### 1881 - Marin County

The southern part of Marin County is experiencing one of the most destructive forest fires that have ever desolated a district in this State. The fire has swept over many miles of country and no one can predict where its ruinous work will be stayed. The district burned is about 12 miles long by 7 or 8 wide. The damage can hardly be estimated. It originated from a fire kindled by a man in clearing some land in which he was burned to death and of which a most harrowing description is given.

-- S.F. Chronicle, Sept. 16

Tamalpais last night flamed its topmost peak like a volcano. The great canyon of the Lagunitas sent up clouds of flame and cinders. The territory over which the fire extended is estimated at 7 miles in length and 3 1/2 in width. Nothing approaching the fire has been seen since the great conflagration of 1859 which lasted for nearly 3 months.

-- S.F. Chronicle, Sept. 19

### 1881 - Los Angeles County

Quite extensive fires have raged for some time past in the neighborhood of Los Angeles. For some days past fierce fires have been devastating the region about San Dimas, which is located above the mouth of Azusa Canyon.

-- S.F. Bulletin, Sept. 17

During the years from 1881 to 1883 inclusive fires were set by herdsmen back of Los Angeles. 1884 saw disastrous floods and tracks and bridges of the S.P. R.R. were swept away and traffic stopped for 6 weeks. At about the same time tremendous fires covered practically the whole face of the Santa Ana Range south of Los Angeles.

-- Page 18 F. S. Bulletin 85 - Plummer

### 1881 - San Diego County

For the last two or three days extensive brush fires have been burning over the mountains 30 or 40 miles east of San Diego.

-- S.F. Bulletin, Sept. 19

### 1881 - San Luis Obispo County

Last week a fire started in a canyon about 5 miles south of San Luis Obispo and spread over an area of about 12 miles. An immense amount of timber and dry feed was consumed. In some places trees  $2\frac{1}{2}$  feet in diameter were burned to the roots.

-- S.F. Bulletin, Sept. 20

### 1881 - Marin County

The Marin fire is now confined to the redwoods on the Sausalito Ranch. Blithdale is safe. 35 to 40 men have been fighting the fire since it began. (This fire has apparently been going a month.)

-- S.F. Bulletin, Sept. 20

1881 - Mendocino County

Fires are still raging in Mendocino County.  
-- S.F. Bulletin, Sept. 22

1881 - Sonoma County

Destructive fires have been raging on Geyser Peak, Sonoma County.  
-- S.F. Bulletin, Sept. 23

1881 - Alpine County

A fire has been raging in the mountains southwest of Markle-ville, Alpine County, for about 3 weeks and has destroyed considerable timber.  
-- S.F. Bulletin, Sept. 23

1881 - Lake County

Fifteen hundred acres of good grazing land was destroyed by fire at the Oak Hills quicksilver mines, Lake County, last week.  
-- S.F. Bulletin, Sept. 23

Says the Lake Port Bee Democrat: For a week or two past the atmosphere has been densely filled with smoke arising from the unusual number of fires throughout the mountains. It is surprising what an immense amount of territory in Lake County has already been devastated this season. -- S.F. Bulletin, Sept. 23.

1881 - Santa Clara County

A fierce fire has been doing considerable damage to timber to the west slope of the range beyond Mount Madonna in Santa Clara County.  
-- S.F. Bulletin, Sept. 24

1881 - San Bernardino County

Brush fires are still burning at San Gorgonio, San Bernardino.  
-- S.F. Bulletin, Sept. 27

1881 - San Diego County

Brush fires are burning near San Rey, San Diego County.  
-- S.F. Bulletin, Oct. 3

1881 - Los Angeles County

The following is taken from the first biennial report of the California State Board of Forestry 1885-86, pages 27 and 28:

The Southern Pacific Railroad was built into the City of Los Angeles through the Soledad Canyon. Until 1883, no serious damage was ever done this road by floods in that location. But about two years before this time certain parties, having stock pastured on the mountains forming the watershed of this canyon, commenced deliberately to set fires in the brush and forests on these watersheds, the idea being to improve the pastures and keep the trails open. There are some fifty or seventy head of horses pastured through this extensive district. These fires destroyed the water-holding capacity of the mountains. As a result, the heavy winter rains of 1884 washed out the entire railroad, roadway, bridges, and all. Travel and business were delayed over six weeks. The railroad repaired the damages done, and the next year being very dry, no injury happened; but the year following, on an ordinary rainfall, measuring less than many of those that had previously done no damage, the railroad again sustained heavy losses.

It is probably no exaggeration to say that it would have been cheap and good business for the railroad company to have paid Jock Talbot and his friend Texas \$5,000,000 to have kept away from the watershed of the Soledad Canyon. The worst thing about it is, that the future promises greater floods in these localities than have ever yet happened.

#### 1882 - Siskiyou County

June. Fifteen square miles of territory near Sawyers Bar burned. The fire burned from June until late in the fall. It was caused by Joe Smith burning a log out of the road.

-- E. G. Bigelow, Sawyers Bar

July 26. Fort Jones has been wreathed in a cloud of smoke for the last week, proceeding from a fire that is destroying timber in the mountains. -- S.F. Bulletin, July 27.

Aug. The headwaters of Methodist, Knownothing Creeks in Siskiyou County were burned over by a fire set by someone in August 1882. The area of the fire was about 17,000 acres.

-- Wm. Balfrey

#### 1882 - Shasta County

Aug. 12. The woods all around Shasta have been on fire for the past 2 days and the citizens have fought the fire all night to keep it from the town. The fire on the road to Redding cut off communication between Shasta and Redding. Several residences below town have been burned to the ground. About 100 residents from Redding and about the same number from Shasta have been fighting the fire. Several fine orchards and vineyards have been destroyed. -- S.F. Chronicle, Aug. 13

1882 - Nevada County

Sept. 4. Heavy fires are raging in the mountains near North San Juan and the smoke covers the whole country thereabouts.

-- S.F. Bulletin

1882 - San Mateo County

Sept. 3. A fire started in the timber land about 3 miles from Redwood City Saturday week and could have been checked probably with little effort but it was thought it would die out for want of material to feed upon. The probabilities now are that a large amount of cord wood will be consumed.

-- S.F. Bulletin, Sept. 4

The forest fires on the mountainside west of Woodside, San Mateo County, are still burning. Most of the timber was cleared off; some was left in Bear Gulch. Cordwood has been burned also, 1 bridge and a shanty. A large force of men are now fighting it.

-- S.F. Chronicle, Sept. 1

1882 - Nevada County

Sept. 5. Forest fires in Nevada County have done considerable damage along Washington Ridge. -- S.F. Bulletin

1882 - Siskiyou County

An extensive fire is raging in the woods near Moser's Ranch, Shasta Valley, in Siskiyou County. -- S.F. Bulletin, Sept. 5

1882 - Lake County

Sept. 6. Forest fires have been burning on the mountains west and northwest of Lakeport for several days. Last evening the smoke was so dense as to entirely obscure the sun before 5 o'clock and persons could feel the effects of it on their eyes in town.

-- S.F. Bulletin

1882 - Nevada County

Sept. 7. Forest fires have destroyed timber near Scotts Flat, Nevada County. -- S.F. Bulletin

1882 - Sierra County

Sept. 7. Forest fires are raging in the hills to the north of Boca and considerable valuable timber is being destroyed.

-- S.F. Bulletin

1882 - Butte County

Sept. 12. Mountain fires are raging in Butte County.  
--- S.F. Bulletin

1882 - San Bernardino County

Sept. 12. The fire reported from the San Bernardino Mountains was confined to hills covered with brush. The timber belt which is above was damaged but little if any.  
--- S.F. Bulletin.

1882 - San Diego County

Sept. 21-24. Brush fires prevailed in this vicinity (Poway, San Diego County) from the 21st to the 24th of September.  
--- Weather Review

1882 - Santa Cruz County

Immense fires are raging in the forests and ranches above here (Santa Cruz). They have already done terrible damage. A despatch from Davenport Landing states the entire country is in flames. Many men are fighting the flames. 140 have gone out from here (Santa Cruz) to aid in an endeavor to arrest the progress of the flames. The Santa Cruz Water Co. has 500 men fighting here. The latest accounts report the fire to be within 5 miles of this place and owing to the rapidity with which it spreads fears are entertained for the safety of the city.

--- Kennibec Journal, Sept. 26

1882 - Tehama County

Aug. 31. The sky at Red Bluff is clouded with smoke from mountain fires set by trappers to drive deer and other game to the clearings.  
--- S.F. Bulletin, Sept. 1

1883 - Placer County

Aug. 31. A fire recently swept over 3000 acres of the San Juan grant on the north side of American River. It is supposed to have been started by hunters. --- S.F. Bulletin, Sept. 1

1883 - Santa Cruz County

Sept. 24. Forest fires north of Santa Cruz are doing great damage. Virgin forests of redwood, tanbark, etc., besides cordwood, shakes, pickets, etc., in many cases the fruit of months of labor of four men, have been destroyed. --- S.F. Bulletin, Sept. 25

1883 - Siskiyou County

Sept. 25. A dense smoke is prevailing at Yreka and extensive forest fires are on the divide between Yreka and Butte Valley.

-- S.F. Bulletin, Sept. 26

Aug. A fire burned over the headwaters of Etna Creek, Crystal Creek, Patterson Creek and part of the headwater of Salmon River in August 1883. In excess of 12,000 acres were burned. This fire was set by a party who also set a fire which covered a large territory between Marble Mt. and Somes Bar the same year.

-- Wm. Balfrey

1883 - Santa Cruz County

Oct. 5. Several families were left homeless by the Santa Cruz Mt. fires.

-- S.F. Bulletin, Sept. 6

1883 - San Luis Obispo

Inspector Bronson's report of January 27, 1913, states as follows:

"Mr. T. C. Still, Postmaster and old pioneer resident at Lapanza, informed me that 30 years ago there was a sweeping fire over the mountains in the Gabilan Range, and that afterwards the erosion of the land on the mountain slopes and also the erosion of the agricultural valley land by the torrential flood condition of the streams 'was something fierce'. Lapanza is located in Sec. 36, T. 29 S., R. 16 E., just outside of the Forest boundary, and Mr. Still as well as other residents in that locality are greatly in favor of the continuation of the Forest and would protest against its elimination."

1884 - Nevada County

Aug. 4. A terrific thunder storm passed over the mountains this afternoon. The lightning was exceedingly sharp and struck many trees in this vicinity (Truckee) which are burning on the hills.

-- S.F. Chronicle, Aug. 5

1884 - Orange County

A tremendous fire covered practically the whole west face of the Santa Ana Range south of Los Angeles.

-- F.S. Bulletin 85, p.19

1885 - Los Angeles County

About 1885 a fire swept two small canyons near Pasadena. The canyons are very near together on the south slope of the San Gabriel Reserve. --- Page 19-20, F.S. Bulletin 85, Plummer

1885 - Sonoma County

Aug. 31. The mountains in this vicinity (Santa Rosa) are almost obscured by smoke from forest fires on this date.

--- Monthly Weather Review, p. 213

1885 - Trinity County

Sept. About 4000 acres of fine sugar pine timber land between the Heath Ranch and the Cummings Ranch near Minersville was burned.

--- John H. Cummings

1885 - Los Angeles County

Sept. 14-22. From the 14th to 20th extensive fires prevailed in the mountains about 15 miles westward of this place. (Cahuega, Los Angeles County) On the 21st and 22nd fires occurred in the mountains and hills to the north and east of the station.

--- Monthly Weather Review

1885 - San Diego County

Sept. 16-23. From the 16th to the 23rd forest fires burned over a considerable area to the northeast of this place (Poway).

--- Monthly Weather Review

1885 - San Luis Obispo County

Sept. 21. A smoky atmosphere prevailed here during the 20th and 21st, being caused by the prevalence of extensive forest fires to the north and east of this place (San Luis Obispo).

--- Monthly Weather Review

Sept. 23. Forest and grass fires have been very destructive in San Luis Obispo County the past week and are still burning some 15,000 acres of the Huer-Guero and nearly all the San Jose Valley were burned over. A large fire is also burning in the vicinity of the Santa Margarita ranch. --- S.F. Chronicle, Sept. 24

1885 - Placer County

Sept. 23. The woods are on fire at this place (Emigrant Gap). Three buildings are burned at Towle, Placer County. The Summit Fire Co. was down. The canyon fire train is fighting west of Alta. The fires are still burning. --- S.F. Chronicle, Sept. 24

1885 - Santa Barbara County

Sept. 23. For several days heavy fires have been burning in the mountains north of Santa Barbara. A large quantity of cord wood was burned, also a barn and number of cattle perished. Today the fire has spread and is much nearer the town of Santa Barbara.

-- S.F. Chronicle, Sept. 24

1885 - Siskiyou County

A fire started on French Creek and burned about 10,000 acres on Blue Ridge near Sawyers Bar in 1885. --- Wm. Balfrey

1885 - Los Angeles County

Mr. P. L. Washburn of the Los Angeles Herald, who owns four hundred acres in the southern end of Kern County, this side of the Tehachapi, informs me that a similar state of things is going on in that section. He travels over the country in going to his place, and he says that last summer alone, probably owing to the large influx of settlers, fifty thousand acres of brush and forest land were burned off on the north side of the Sierra Madre Range, from the Cajon Pass west to the mountains where he is. Consequent upon this, the water is cutting gullies in numerous places burned off, or below such places, and is running during the rains in dangerous and destructive torrents. He spoke of one instance on the Cottonwood Creek, where a man had ten acres of corn land swept away by a new torrent that originated in a twice burned off mountain.

--- First Biennial Report, State Board of

Forestry, page 31

1885 - Placer County

One fire last year (1885) burned along American River Hill one mile wide by three in length. --- S. J. Pullen, County Clerk, 1st biennial report State Board of Forestry

1885 - Eldorado and Sonoma Counties

Forest fires which broke out at Cedar Hill, Eldorado County, and in Packer Canyon, Sonoma County, did immense damage, and a big blaze in Topango Canyon of the Santa Monica Mountains for a week covered southern California with a canopy of smoke.

-- Grizzly Bear, August 1935

1886 - Nevada County

July 3. Today a fire started in the pine woods south of Glenbrook Park and was driven towards the enclosure by a strong wind. A large force of men turned out and by hard work succeeded in checking the flames. --- S.F. Chronicle, July 4

1886 - Ventura County

Aug. 7. A man from Frazier Mountain in Ventura County reports extensive forest fires in that vicinity. One firm has 6000 to 8000 sheep in that part of the country and they state their herders have been burning off valuable yellow pine and oak to make grass for the sheep. A ranch of 2000 to 3000 acres has been burned over.

— S.F. Chronicle, Aug. 8

See p<sup>4</sup> 13

1886 - Santa Cruz County

Sept. 10. Forest fires are raging in nearly every gulch and canyon in Santa Cruz County. Within the last two days thousands of cords of wood and much split lumber and miles of fencing has been destroyed. It is impossible to give an estimate of the damage. The entire foothill section is enveloped in smoke. One dwelling burned on Vine Hill.

— S.F. Chronicle, Sept. 11

1886 - Sonoma County

Sept. 10. This locality has been smoky for several days from fires in the woods near Occidental, Sonoma County. Over 8000 cords of wood have been burned and much other damage done.

— S.F. Chronicle, Sept. 11

1886 - Nevada or Placer County

Sept. 10. The fire which last night threatened the snow-sheds (S.P.R.R.) and a sawmill was extinguished after many acres of excellent timber were destroyed. — S.F. Chronicle, Sept. 11

1886 - Nevada County

Sept. 10. A terrible forest fire has been raging a few miles from Nevada City and last night it extended to a residence which was entirely consumed. — S.F. Chronicle, Sept. 11

A forest fire got out of control near You Bet, Nevada County, September 16, and destroyed the residence and sawmill of Louis Voss - loss \$40,000. — Grizzly Bear

1886 - Napa County

Nov. 15. There are three large forest fires raging east of Napa in Napa County. The damage cannot be ascertained.

— S.F. Chronicle, Nov. 16

1886 - Santa Cruz County

Nov. 15. The woods in Gilbert Gulch, about 3 miles from Santa Cruz are on fire and considerable cord wood, standing timber

and many fences were destroyed. The flumes of the City Water Works were in danger and a force of men was sent out to protect them.

-- S.F. Chronicle, Nov. 16

1887 - Santa Cruz County

May 21. A big fire has been raging in the woods near Lomaprieta for the past few days and is apparently spreading.

-- S.F. Chronicle, May 22

1887 - Sonoma County

May 27. Quite an extensive mountain fire is raging on the east of Napa Valley. It is not known how much damage is being done but the indications are that it is only brush and small trees.

-- S.F. Chronicle, May 28

1887 - Tulare County

July. 1,200 acres of timbered lands were burned near Hot Springs. It started from firing a log which was across a trail.

-- W. C. Burton

1887 - Calaveras County

July 8. A forest fire broke out yesterday near the Big Trees, Calaveras County, which threatened considerable destruction but a large force of men were employed and the fire was brought under control.

-- S.F. Chronicle, July 9

1887 - Tehama County

July 11. A disastrous wood fire has been raging on Pine Creek since last Friday. A large area has been burned over and many residents in that vicinity have suffered severe losses.

-- S.F. Chronicle, July 13

1887 - Placer County

July 11. A furious fire swept over about two miles square near here (Loomis) yesterday afternoon .... A large crowd of men surrounded the fire and got it under control but not until it had burned a large amount of fencing, pasture land and woodland .... The fire is supposed to have been started by careless hunters.

-- S.F. Examiner, July 12

1887 - Shasta County

July 14. Forest fires which have been raging for several days 4 miles north of this place (Sisson) today reached the woodpile along the railroad. Gangs of men have been fighting the fire since

yesterday but have not succeeded in checking it as the fire extends over a mile in heavy timber. -- S.F. Chronicle, July 15

1887 - Shasta County

July 19. The fire north of here (Sisson) has done considerable damage. The Postal Telegraph line has been damaged to such an extent that all northern communication was shut off over that line. A great quantity of wood and posts, a mile of fence and 8000 shakes were destroyed. -- S.F. Chronicle, July 20

1887 - Sierra County

July 25. Forest fires are raging in this vicinity (Sierra City) and if not speedily checked it is feared much damage will be done to mining and other properties.

-- S.F. Examiner, July 26

1887 - Santa Clara County

July 25. A fire has been raging in the redwoods west of Gilroy for two days and there seems no prospect of checking it soon. About 300,000 feet of cut logs belonging to Whitehurst and Hedges have been destroyed. -- S.F. Examiner, July 26

1887 - Tehama County

July 25. A report is current that a fire is destroying the pasturage of the Diamond Ranch on Cottonwood Creek.

-- S.F. Examiner, July 26

1887 - Shasta County

The mountain fires have been quenched by a fine rain this morning which cleared the air of smoke.

-- S.F. Chronicle, July 29

1887 - Alameda and Santa Clara Counties

Numerous fires along the line of the S.P. Coast R.R. have played havoc with the timber of that region, destroying many thousand feet. Between Dougherty's Mills, Alameda County, and Wrights Station, Santa Clara County, there have been 5 forest fires in the last 6 weeks, all of them most destructive. One of the fires was started by a camp fire of a pleasure party and another by a spark from a locomotive. The flames have seriously threatened the track and the R.R. Co. keeps men on guard to prevent destruction of the road bed. The fires are still burning.

-- S.F. Chronicle, July 30

1887 - Tehama County

The fires which have been raging on Cottonwood Creek, 8 miles southeast of this place (Anderson) during the last 2 days have burned several houses. Heavy damage is reported. -- S.F. Chronicle, Aug. 5

1887 - Ventura County

A man from Frasier Mountain reports extensive forest fires in that vicinity. One firm has 6000 to 8000 sheep in that part of the country and they state their herders have been burning off valuable yellow pine and oak to make grass for the sheep. A ranch of 2,000 to 3,000 acres has been burned over. -- S.F. Chronicle, Aug. 8

1887 - Shasta and Trinity Counties

Aug. 10. The forest fires that have been raging so fiercely throughout the country for the last month and have destroyed so much timber and property have about died out. The Western Union Telegraph lines and poles were burned in many places. A fire is now burning on Trinity Mountain which delays telegraph and travel.

-- S.F. Chronicle, Aug. 11

1887 - Nevada County

Aug. 13. Forest fires are prevailing in various parts of the county and destroying much young timber, firewood and fences. Two trestles of a tram railway in Little York Township were burned.

-- S.F. Chronicle, Aug. 14

1887 - Glen County

Aug. 18. A party who returned (to Orland, Glen Co.) from a hunting trip on the coast range about 60 miles west of this place near Mansions Mill report an extensive fire on Shepherds ridge. This is about 3 miles to the north of the sawmill and across the canyon. The fire has been burning for 2 weeks and has destroyed 25,000 acres of timber. Active endeavors have been made by those in the vicinity to put out the fire but without success. It is presumed to have originated from camp fires of either hunters or herders.

-- S.F. Chronicle, Aug. 19

Aug. 18. An extensive forest fire is reported to be raging about 60 miles to the west of here on the summit of the Coast Range near Manson's sawmill. A party who went up there .... about a week ago for the purpose of hunting report that the fire was burning when they got there and had then destroyed a large tract of heavy timber on Shepherds ridge just north across the canyon from Manson's mill and that the fire was still raging when they left yesterday .... The loss can be but vaguely estimated. The party place it at about

25,000 acres of timber and in addition to this it has destroyed a great amount of scrubby timber lining the sides of the mountains as well as feed for stock .... Efforts have been made by those interested in that vicinity to extinguish the fire but without success.

-- S.F. Examiner, August 19, 1887

1887 - Nevada County

August 19. A forest fire burned two trestles of the Vosses lumber railroad in Little York township and did other damage today. It is now under control. -- S.F. Examiner, August 20, 1887

1887 - Shasta County

August 23. The forest fires which have been raging so fiercely and with such damaging effect in this vicinity (Shasta, Shasta County) all summer still continue to burn. For a while the fire was under control but during the last few days has broken out again and is now burning fiercely near the stage road north of this place. Between here and French Gulch and on Trinity Mountain, near Trinity Center the fires are doing great damage and causing inconvenience to travel. -- S.F. Chronicle, August 24

August 23. Large forest fires have again broken out north of this place (Shasta) about ten miles and are burning fiercely. Great damage is being done on Trinity Mountain near Trinity Center.

-- S.F. Examiner, August 24

1887 - Sierra County

Numerous forest fires are raging within a few miles of here (Sierra City). -- S.F. Chronicle, Aug. 25

Aug. 26. Much feeling is manifested in this part of the county (Sierra City) against the sheep herders who it is believed start most of the forest fires raging through the mountains.

-- S.F. Chronicle, Aug. 27

1887 - Nevada County

September 12. Indian springs and Penn and Pleasant Valleys were swept by fires yesterday and it was late before the flames were brought under control. Much fencing and a large area of pastureage was burned. The district burned is the finest farming part of this county. -- S.F. Examiner, Sept. 13

1887 - Yuba County

Sept. 12. Word has just reached here (Marysville) that forest fires have been raging near Oregon House about 30 miles

northeast of here. For two days the fire has been burning but is now under control. Two houses, many miles of brush fence and a number of head of livestock have been burned.

-- S.F. Chronicle, Sept. 14

1887 - Sonoma County

A damaging forest fire has been burning in the vicinity of Freestone some miles west of this city (Santa Rosa) since Monday.... Several miles of fencing have been destroyed. Feed and timber standing and cut have been destroyed.... -- S.F. Examiner, Sept. 13

Sept. 14. A damaging forest fire has been raging in the vicinity of Freestone some miles west of this city (Santa Rosa). Several miles of fencing, grain feed and timber standing and cut have been destroyed. The loss cannot be estimated. The fire this evening is under control. -- S.F. Chronicle, Sept. 15

1887 - Nevada County

Sept. 15. A forest fire half a mile by a mile and a half in extent swept down on a supply camp near You Bet in Nevada County. The County bridge in the course of erection near that point had a narrow escape. --- S.F. Chronicle, Sept. 16

1887 - Santa Cruz County

Sept. 15. The thermometer at noon today stood at 92° the hottest of the season (Santa Cruz). The heat was added to by the large fires which are raging in the forest near Soquel and Aptos. A forest fire near Morgan and Dabadi's mill this week destroyed five private bridges. The fires are now under control, a large force of men having been fighting them. -- S.F. Examiner, Sept. 16

1887 - Marin County

Sept. 17. A fire of wide range is raging about the Chielano Valley, Marin County, and is doing a great deal of damage by destroying fences and stock feed. The fire was started yesterday by Swift who was burning brush. It soon got away from him and is now widespread though a large gang of men fought it all night long.

-- S.F. Examiner, Sept. 18

1887 - Nevada County

Sept. 17. Five great forest fires are now raging in this county. The damage is mostly confined to the timber and fencing. It is thought that one or more buildings have been destroyed.

-- S.F. Examiner, Sept. 18

1887 - Nevada County

Sept. 20. A fire started in the forest near Horton's Ranch, Penn Valley, and spread rapidly towards the north, the thick dry grass and brush affording an abundance of material for the flames to feed upon. When one thinks a forest fire is put out it is generally most dangerous. The tract burned over is about four miles long and three miles wide. The principal loss is the dry feed and fencing.

— S.F. Chronicle, Sept. 25

1887 - Marin County

Sept. 23. Forest fires in Marin County continued to burn. More than 2,000 acres of fine grain land has been burned with several miles of fencing. — S.F. Examiner, Sept. 24

1887 - Santa Cruz County

Oct. 7. Forest fires raged today in the rear of the Hugh Evans and Gaukryer Ranches in Happy Valley about four miles from the city of Santa Cruz. As the wind was blowing strong the fire extended over quite an extent of land. — S.F. Chronicle, Oct. 8

1887 - Alameda County

Oct. 8. A forest fire broke out at 8:00 o'clock this morning in Talomares Canyon. The high wind caused it to spread rapidly and it swept through the hills with great fury, destroying everything in its path. It burned to the Dobbel Ranch several miles from where it started and great damage has been done.

— S.F. Chronicle, Oct. 9

1887 - Napa County

Oct. 8. Five fires were burning in the mountains this afternoon and threatening great danger. Three mountains are burning tonight, one north of St. Helena and one west, brightly illuminating the streets. The other is south from here (St. Helena) on Atlas Peak, which looks like a volcano. Much damage will be done by the fires. — S.F. Chronicle, 1887

1887 - Santa Cruz County

Oct. 10. The forest fires are now under control in the vicinity of Skyland, but it is still raging near a box mill. One man lost his entire stock of box bolts and forty cords of wood.

— S.F. Chronicle, Oct. 11

1887 - Sonoma County

Oct. 10. A fire that originated on a ranch (near Santa Rosa) has travelled over a large area of country and destroyed

timber, vineyards, fencing and dwelling houses. The fire has come within eight miles of this city (Santa Rosa) and last night the mountains east of here were lurid with flames and this afternoon smoke settled in Santa Rosa Valley so densely that the sun was almost eclipsed. Flames were travelling at the rate of a mile an hour. The Sonoma and Santa Rosa public roads have been destroyed for several miles and communication between this city and Glenn Ellen is cut off. The fire is near a well enclosed improved section of the country. The heat is so intense that the fire fighters cannot get near the fire. One died this afternoon from heat while fighting the fire.

-- S.F. Chronicle, October 11

#### 1887 - San Mateo County

Oct. 10. Our usual fall fires are burning near Bald Knob and Irish Ridge (near Half Moon Bay). Stables and slab piles have already been destroyed at the Fremont Mill, as well as the buildings on the Durham Ranch on Irish Ridge. Almost every fall witnesses the destruction of thousands of dollars worth of timber and other property in this district from fires that are usually the result of carelessness.

-- S.F. Chronicle, October 11

#### 1887 - Alameda County

Oct. 10. The Paloma fires swept with great rapidity through the hills extending beyond Mission San Jose, covering over 20,000 acres. The damage cannot be estimated as the loss was mostly timber and pasture. Many succeeded in saving their dwellings by plowing around them and keeping watch night and day on the flames. The fire was started by a party burning brush in Palomares.

-- S.F. Chronicle, October 11

Oct. 10. The Redwood Canyon fire due north of Hayward was burning east in the vicinity of Lake Chabot on Browns land. Fencing, 340 acres of pasture and a great amount of timber were destroyed.

-- S.F. Chronicle, October 11

#### 1887 - Napa County

Oct. 11. A fire is now raging two miles east of the head of Rincon Valley on the St. Helena road. It started on a ranch ten miles to the east. It is not yet under control, but the winds have subsided. Last night the fire attacked the forest pine and travelled so rapidly that parties in the vicinity fled. This evening the fire's course westward is checked and it is now burning near Culbert's Ranch at the head of Wardwest Creek. 20,000 acres have been destroyed. Bleak mountain sides mark the destruction work of the fire. Sixteen persons lost heavily. Dwellings, barns, fences, hay, vineyards, large quantities of cord wood besides vast amounts of timber and wood were consumed.

-- S.F. Chronicle, October 12

Oct. 11. Fires in the mountains east and west of St. Helena have been burning over vast areas since Saturday (October 11, Tuesday). The damage is great to fences, barns, vineyards, cabins, cord wood and standing timber on Howell Mountain. No estimate of the immense damage can be made. -- S.F. Chronicle, Oct. 12

1887 - Butte County

Big fires are raging near Nimshew sixteen miles from Chico. A valuable timber belt has been burned over with a loss of \$5,000 or \$6,000. The fire is beyond control and will be allowed to burn out.

-- S.F. Chronicle, October 12

1887 - Sonoma County

October 12. The fire in Los Guilicos Valley (near Santa Rosa) is now under control. No fears are now entertained of further damage from the fire on Pine Mountain, as it is now burning feebly and under control.

-- S.F. Chronicle, October 13

1887 - Sonoma, Alameda, San Mateo and Santa Cruz Counties

October 12. For the past four days forest fires have been raging in Sonoma, Alameda, San Mateo and Santa Cruz Counties. In Alameda thirteen miles have swept clean. Several fine farms have been consumed and the stock killed. In San Mateo several bridges and shingle mills have been burned. In Santa Cruz two box mills have been destroyed, valuable farms have been swept out of existence and thousands of cords of wood consumed. From Sonoma comes the worst report. The flames have travelled ten miles in the past twenty-four hours destroying everything in their path. Families are homeless and miles and miles of timber and vineyards are destroyed. Hundreds of men are fighting the fire. The loss will be immense.

-- S.F. Chronicle, October 13

1887 - Amador County

October 13. Several destructive forest fires have occurred near Jackson this week. One five miles east from Jackson swept over from twenty to thirty square miles, threatening the towns of Pinegrove and Clinton, burning several barns, quantities of hay, fencing, farming implements and about 500 cords of wood. A fire between Sutter Creek and Ione yesterday destroyed the Mt. Echo school house and devastated several miles of territory.

-- S.F. Chronicle, October 14

1887 - Marin County

October 19. A big brush fire raged all the afternoon a few miles northwest of San Rafael. A large area was burned over.

-- S.F. Chronicle, October 20

1887 - Sonoma County

October 19. A fire at the head of Mark West Creek burned fiercely last night and was fought by the mountain tenants whose homes were threatened. It swept through the canyon thick with underbrush and pine trees. Several men barely escaped the fire. Fierce fires are also reported near Forest Valley.

-- S.F. Chronicle, October 20

1887 - Sonoma and Napa Counties

October 19. Several large fires are burning in the mountains. There is a very heavy one near Mt. Jackson and one on the side of Mt. St. Helena in plain view of the town of Healdsburg.

-- S.F. Chronicle, October 21

1887 - San Diego County

October 21. Brush fires prevailed north and northwest of this place (San Diego) on the 21st. Light smoke from fires burning in the mountains north and east of here (San Diego) overspread this region.

-- Monthly Weather Review, Vol. XV

1887 - Los Angeles County

October 22. Extensive fires have prevailed for several days past in the Santa Monica Mountain range, destroying considerable amount of timber. Extensive fires are also reported in the San Bernardino Mountains. On the 23rd an extensive brush fire was burning on the hills east of this city (Los Angeles).

-- Monthly Weather Review, Vol. XV

1887 - Sonoma County

October 24. The Geyserville Hotel was saved from a forest fire by hard work. The fire came to within three miles of the hotel, but the wind changed and the fire was checked.

-- S.F. Chronicle

October 24. The forest fires are still burning in this section (Santa Rosa). The fire at the head of Mark West Creek is still smoldering and at times it burns very briskly. A slight wind rekindles the flames and causes much damage.

-- S.F. Chronicle, October 25

1887 - Humboldt County

October 26. The most destructive fire that has ever occurred here is raging between this place (Petrola) and Shelter Cove, a distance of thirty-five miles. Four miles inland, all vegetation is burned. Reports state that numbers of live stock, dwellings, barns and fences are burning. -- S.F. Chronicle, Oct. 27

1887 - Sonoma County

October 28. A man just returned to Petaluma from the neighborhood of the fires in the upper part of the County says in one gulch in the mountains he counted thirteen dead deer that had been surrounded by fire and burned to death.

-- S.F. Chronicle, October 29

1887 - Plumas County

October 29. A fire has been raging in the mountains north of Spanish town and near the Spring Valley Company's reservoir. A very dry northwest wind carried the flames wherever there was sufficient brush or grass to feed them. -- S.F. Chronicle, Oct. 30

1887 - Humboldt County

November 5. The sweeping fires which have been raging for over two weeks are now confined to the thick forests. They extended inland in places for twenty miles. Travellers from Mendocino County relate that it is almost impossible to pass. High winds prevail. In places the fire swept with such rapidity that horses were unable to keep up with it. It is estimated that 15,000 acres of grazing land and 35,000 acres of brush land were burned. Probable damage to the numerous stockmen is estimated at \$15,000.

-- S.F. Chronicle, November 6

1887 - Tuolumne County

Late in the summer of 1887 over 10,000 acres of forest lands in the vicinity of Buchanan and Spring Gulch was swept by a fire. It started near Buchanan and extended across Hunter Creek to the Geo. Ingalls ranch. -- Edward Janess

1887 & 1888 - San Diego County

At least one-third of the land covered with brush, grass, and oak timber in the southern part of this County has been burnt off by settlers within the past eighteen months, doing a great deal of damage, not only as regards pasturage, timber, and bees, but also decreasing the reservoirs of water, which the absence of brush will effect, to a certain extent, the same as timber. These fires are caused by careless settlers, who at the time only intend to burn a few acres of brush, but everything being very dry at the time the fire soon gets out of their control, and the result is the fire takes everything before it. I have seen these fires spread five miles square in a few days. It is impossible to convict these parties without they are caught in the act.

-- Fred E. Lewis, 2nd biennial report California State Board of Forestry, 1887 - 88, page 22.

1887 & 1888 - Plumas County

Respecting forest fires, I have to report that they have, during the past summer, and up to the present time, been rather numerous in this quarter of the State, and some of them quite extensive in area, doing much damage. Around Big Meadows, Indian and American Valleys, and elsewhere in the County, fires have raged at intervals during the summer; and, though the damage is not very serious in any one locality, yet in the aggregate it is calamitous. Two summers ago a forest fire occurred in the Cherokee Mining District, near Greenville, that consumed a \$5,000 quartz mill. Two of the most extensive and destructive fires in the timber adjacent to Indian Valley were the result of lightning, one of the causes of fire on the timber domain. Other causes are, presumably, the carelessness of hunters and stockmen and, inferentially, the work of some of the sheep men who desire better pasturage on the burnt districts the following season.

-- G. D. Hines, 2nd biennial report California State Board of Forestry, page 23.

1888 - San Bernardino County

June 9. The brush is on fire in the mountains south of this city (Colton). -- S.F. Chronicle, June 10

1888 - Nevada County

July 24. Large forest fires are reported in the higher mountains, destroying valuable timber. -- S.F. Chronicle, July 25

1888 - Placer County

July 30. There are extensive fires in the woods and fields between here (Grass Valley) and Colfax on the line of the wagon road. Heavy losses in fences and timber. --S.F. Chronicle, July 31

1888 - Nevada County

August 9. Two men had a fearful experience last evening while driving home from a place known as You Bet. They ran the gauntlet of a hot fire for two miles on both sides of the road. Huge pines blazed and one place on their way was blocked by fallen trees. They had to assist in burning so as to get a roadway. The absence of wind is all that allowed them to get through. Yesterday all of the timber east of Greenhorn Creek was on fire. At Johnston an extensive shingle mill is reported destroyed. -- Morning Oregonian, August 10. This account verified by S.F. Chronicle, August 16.

1888 - Santa Cruz County

Another fearful fire scar is being printed on the beautiful Santa Cruz mountains where disastrous conflagrations have come to be yearly occurrences of late. Each visitation denudes hundreds of acres of fine pine, redwood and tan bark oak of every vistage of green and leaves a blackened waste that is saddening to the eyes of beauty lovers and millmen in a country where timber is rapidly becoming scarce. The present fire broke out last Friday morning on the southerly ridge of Ben Lomond mountain. J. W. Perry ---- started a guard fire to assist him in getting rid of underbrush----. A breeze sprang up and the dangerous agent escaped from control --- sweeping everything between the summit of the ridge and the county road --- armies of fire fighters were organized to give battle ---. There were over 300 woodsmen and ranchers at work before dark Friday night ---. The range of the flames was usually half a mile square but for what seemed miles their track was marked by a bright glow where giant trees smouldered in coals hours after all blazing material had been consumed ---. -- S.F. Examiner, August 14

August 15. For the past few days a fire has been raging on Ben Lomond, which is perhaps unequalled in the history of forest fires in this county. It started near Boulder Creek and spread up over the mountain and is now running down the gulches leading from Ben Lomond. Yesterday it raged fiercely down the San Vicente. About fifty men assisted in fighting the flames. The work of the fire fighters has been of little avail except to save some farm property. It is probable that it will run down Scott's Creek. Immense damage has been done and the end cannot be foretold.

-- S.F. Chronicle, August 16

1888 - Nevada County

Dr. Jones and R. H. Snik had a fearful experience last evening while driving home (Nevada City) from You Bet. They ran a gauntlet of hot fire two miles on both sides of the road. Huge fires blazed and one place on their way was so blocked by fallen trees that they had to assist them to burn to get a roadway .... All the timber east of Greenhorn Creek is on fire. At Johnston an extensive shingle mill is reported destroyed.

-- S.F. Examiner, August 16

1888 - Sonoma and Santa Clara Counties

August 25. The northern and eastern portions of the valley are enveloped in smoke caused by the forest fires in Sonoma County. A report says that Los Gatos, where fires raged to a great extent last year, is again in danger. Another fire is reported in the vicinity of Healdsburg. -- S.F. Chronicle, August 26

1888 - Shasta County

August 25. Forest fires, plainly visible from Cottonwood, are raging in the mountains thirty miles east of this town.  
--- S.F. Chronicle, August 26

1888 - Butte and Glenn Counties

August 28. Destructive forest fires are raging in the mountains of Butte and Glenn Counties and considerable damage to property has resulted. Among other things the Hasty Sawmill was destroyed. A man was arrested for setting forest fires near a sawmill. Forty men worked two days and one night to put out the blaze.  
--- S.F. Chronicle, August 29

1888 - Los Angeles County

August. Extensive fires prevailed at Anaheim in the upper Santa Ana Valley and below Norwalk on the 13th. Smoke from large mountain fires was observed over the Sierra Madre Range northeast of this city on the 22nd and 23rd. -- Monthly Weather Review, p. 22

1888 - Tuolumne County

About September 1888 a fire started near Empire Mill and burned up towards Cold Springs. About 1500 acres were burned. A lumberman (B. F. Way) is said to have caused the fire in burning a log out of the road.  
--- Edward Janess

1888 - Los Angeles County

One man lost his life in a grass fire in San Fernando.  
-- S.F. Chronicle, September 3

September 7. A large fire was reported in the Little Santa Anita Canyon east of Sierra Madre. -- Monthly Weather Review

1888 - Santa Clara County

September 11. A fire has swept over several sections of land in the west range nine miles from Gilroy destroying much fencing and two or three barns of hay. Settlers are fighting the huge breastworks of fire near Murphey's Canyon ----.

-- S.F. Examiner, September 12

1888 - Santa Cruz and Santa Clara Counties

October 22. Mountain fires north of this city (Santa Cruz) are doing much damage to the woods. Much timber has been burned and the flames are spreading rapidly. The station house

at Wrights, Santa Clara County, and the bridge of the Southern Pacific R.R. had a narrow escape. -- S.F. Chronicle, October 23

1888 - Alameda County

October 22. A destructive fire is now raging in the hills five miles northeast of here (Hayward). It leaped the canyon 500 feet. Ranchers have burned around their houses.

-- S.F. Chronicle, October 23

1888 - Santa Clara County

October 22. A mountain fire a few miles west of here (Gilroy) yesterday morning burned over a large acreage of chaparral, doing no material damage. Carelessness of hunters was the cause.

-- S.F. Chronicle, October 23

1888 - Santa Cruz County

October 23. Fires are raging north of Santa Cruz at the head of Glenn Canyon, near Scott Valley, on Blackburn Gulch, near Doughertys Mill and south of Caseys. Great damage has been done to fruit ranches and wheat and in the Santa Cruz Mountains some of the largest redwoods have been burned.

-- S.F. Chronicle, October 24

1888 - Santa Cruz and San Joaquin Counties

October 24. Reports show that forest fires raged in Santa Cruz and San Joaquin Counties and that great damage was done to the fruit ranches and wheat. -- Monthly Weather Review

1888 - Calaveras County

There have been about four fires which did considerable damage to limited localities in destroying mining ditch flumes, and in one case burned up about two thousand cords of wood, but they were soon mastered and extinguished. The most of our fires are chargeable to accident while men are out hunting, and carelessness in lighting pipes and dropping fire in the dry grass.

-- A. H. Coulter, Special Agent, State Board of Forestry,  
Second biennial report.

1888 - San Bernardino County

I would say to the State Board of Forestry that I have done all in my power to keep down fires, and I have succeeded in keeping sheep off of the most of the State and Government land in and about Bear Valley, one of the finest timbered and watered districts in the mountains, by placing friends of mine on timber claims in various places through the mountains, so that sheep

could not get in without infringing on their claims, and by so doing have kept the mountains almost free of fires, as the sheep men are the cause of nine-tenths of the fires in the mountains.

-- Gus Knight, Special Agent, second biennial report,  
State Board of Forestry

#### 1888 - Sierra County

We witnessed last season a fire in Sierra County which, raging for several days, laid bare 2,000 acres of very valuable timber and of course killed the young trees.

-- Second biennial report, California State Board of Forestry, page 129

#### 1888 - Tuolumne County

There can be no doubt that sheep are a curse to the State; they penetrate everywhere, destroy the roots and seeds of the grasses, in traveling over the hills they keep the rocks and earth moving, destroying vegetation and denuding the hills of their soil, and are the cause of more fires than anything else.

-- J. P. Dart, Special Agent, State Board of Forestry,  
second biennial report State Board of Forestry.

#### 1888 - Sierra Nevada Mountains

The fires have been set in years past by Indians to drive or herd their game. Sheepherders set many fires wantonly, also campers, and travelers generally. Railroad engines occasionally fire the dry leaves and weeds along their lines, which escape to the woods, but generally much vigilance is used on the part of workmen to prevent such accidents. Rarely lightning ignites a tree, at least certain forest fires are reported to be caused by lightning. As the timber lands pass into the possession of private individuals the owners generally make some effort to protect the forest. While the title remains in the Government no one seems to care if the forests do burn over. In certain localities fires were very destructive over large areas in the year 1887. In one place several sections (mile-square plats) were burned by a single fire in one night. Seven or eight years ago a fire that started near Verdi, Nevada, from a sheep camp, moved westward for several weeks, destroying over seven thousand acres of excellent timber.

The most disastrous fires, from a forest point of view, are unquestionably those started by the sheepherders who drive their flocks into the higher regions of the Sierras to feed during the summer months. These men, ignorant and shiftless, as a rule, do not comprehend the magnitude of the injury inflicted upon forests by fire, and looking upon our vast mountain ranges as "no man's land," think that it does not matter in the least

how they treat them. A great many of these herders, especially those who return year after year to the same grazing regions, set fire to the undergrowth upon leaving in the fall, so as to improve the herbage of the following spring and summer. . . . In the Sierras, the largest and most destructive fires occur almost invariably in those regions used for pasture. Fires occur more or less frequently near habitations, caused by the carelessness of settlers in clearing land and allowing their brush fires to get beyond their control and escape into the surrounding forest; but they form but a small percentage of the total number. Hunters, and especially Indian hunters, are blamed for many fires, but they are probably not guilty of more than 20 per cent of the charges made against them, and each year sees even this small percentage lessened.... Teamsters freighting over mountain roads are occasionally the cause of fires, either by neglecting to extinguish a camp fire before leaving a camping place, or by setting fire to a windfall which has toppled across the road, from which the underbrush ignites and starts a forest fire. -- Second biennial report California State Board of Forestry, 1887-88, pages 124, 154 and 155.

During the summer months extensive forest fires prevailed throughout the mountain regions. It is true, some of these are unavoidable, but the vast majority are the result of negligence and carelessness, and their originators should be promptly prosecuted when discovered. The most destructive fires that I have ever witnessed were set by sheep men, for the purpose of removing chaparral and undergrowth, in order that a crop of grass might result the next season. It is evidently useless to prosecute those whom we believe responsible for the fires, unless they are directly caught in the act. To watch and detect violations of the law would require a large force of patrols, a costly and at present impossible undertaking. As these ranges are mostly on unentered and unsurveyed Government lands, a cheaper and more effective method of procedure would be to secure the passage of an Act of Congress prohibiting the use of these lands for such purposes. It would then be a comparatively easy task to remove from those regions this nomadic and irresponsible class of men. Another important source of fires arises from the annual attempts to clear off land, fire being resorted to as the most effective and economical method. The favorite time for clearing land is during the fall months of the year, when the grass and brush will readily burn. The danger from such fires prevails in California to a much greater extent during our prolonged dry season, as all vegetation is then highly inflammable, and the difficulty of controlling fires is thereby greatly increased. I have seen large areas of territory completely devastated by fire, the result of some careless settler's attempt to clear his land for cultivation. I have seen hundreds of acres of valuable timber

blackened and scorched on the mountain sides, standing there as monuments to a reckless and improvident people. -- Edward L. Collins, Special Agent, State Board of Forestry, Second Biennial Report, State Board of Forestry, pages 47 and 48.

#### 1888 - San Mateo County

To illustrate the difficulties in the way of securing convictions, I will refer to the case of The People vs. Robert Gordon, which was tried in San Mateo County during the early part of this year. The defendant, Gordon, was seen to start a fire in the brush, and then abandon it. The fire rapidly spread, until it had destroyed several thousands of acres of valuable redwood timber. All the circumstances connected with the case went to show that the fire was started for purposes of retaliation. Upon trial the jury were convinced that Gordon was guilty, but acquitted him on the ground that if convicted it would take all of his property to pay the fine. This, the jury considered, would work too great a hardship on the man. -- Second Biennial Report, State Board of Forestry.

#### 1889 - Sonoma County

July 3. A forest fire is raging on Cobb Mt. near the Geysers. The flames are visible from the city (Healdsburg).  
-- S.F. Chronicle, July 4

#### 1889 - Nevada County

July 6. Extensive forest fires are raging in the splendid timber two miles southeast of town (Grass Valley). Fences have been burned and buildings are in danger. -- S.F. Chronicle, July 7

#### 1889 - Santa Barbara County

July 29. Field fires have been burning in the foothills back of Santa Barbara. Twelve buildings, a number of barns and a number of horses and cattle have been destroyed. Loss \$50,000.  
-- S.F. Chronicle

#### 1889 - San Diego County

July 29. Forest fires have been raging in the San Jacinto and San Ysabel Mountains in San Diego County. The territory burned over is completely stripped. People are taking all precautions to protect crops.  
-- Morning Oregonian

1889 - Butte County

July 29. Forest fires are raging on the Humboldt Road eighteen miles from this place (Chico). The fire has burned over a distance of four miles in length and has destroyed much valuable timber.

-- Monthly Weather Review, page 188

1889 - San Diego County

July 29. People coming in from the mountains report great damage from fires. Many miles of country have been burned over. The fire started near Ramea Friday and is still (Monday) burning. Deputy Constable Willer says that the buggy in which he came to the city (San Diego) was so blistered while on the Mussy road that the paint is ruined. The fires are making the weather in the inland almost intolerable and the farmers are having great difficulty in saving their crops.

-- S.F. Examiner, July 30, 1889

1889 - Butte County

July 29. Large forest fires are raging 18 miles from Chico on the Humboldt road. The burned district is four miles in length. The fire is sweeping everything before it. Much valuable timber has been destroyed. Residents near the place are fighting the fire and expect to get it under control today.

-- S.F. Examiner, July 31

1889 - Sierra County

July 30. Large forest fires are raging in this section (Sierra City). The hot spell is something remarkable. Water for mining is getting short.

-- S.F. Examiner, July 31

July 30. Large forest fires are raging in this section (Sierra City).

-- S.F. Chronicle, July 31

1889 - Lassen County

July 31. Forest fires have been burning for the last two months to the north and west of this city doing considerable damage to stock ranges and timber land.

-- T.B. Sanders, Monthly Weather Review, page 188.

1889 - Butte County

August 1. A special agent of the General Land Office has been in Chico investigating the large forest fires near here (Chico). Several sections have burned over, destroying a large quantity of valuable timber. It is impossible to learn the origin of the fire, but it is supposed to have been started by careless campers.

-- S.F. Chronicle, August 2

1889 - Mariposa County

August 8. There was a fire on the Big Trees road within a mile of Wawona, which was kindled inside the historic sugar pine. The tree was saved. An area of several acres was burned over. There was positive evidence that the origin was incendiary.

-- S.F. Chronicle, August 10

1889 - Sonoma County

August 9. In the recent forest fire in the northwestern portion of this county one person lost 45,000 posts and 200 cords of wood. Another house was burned with all its contents. His loss is estimated at \$8,000. -- S.F. Chronicle, August 10

1889 - Placer County

A brush fire in the Sierra Nevadas at 2 o'clock this afternoon ignited the snowsheds between Cascade and Cisco station .... The fire train succeeded in controlling the flames .... Three miles of shed including the Cascade telegraph office .... totally destroyed. About a mile of track was damaged .... will have to be relaid ....

-- S.F. Examiner, August 10

1889 - Mariposa County

There is another fire west of the grove (Wawona), the origin of which is undoubtedly incendiary. A working force has been sent equipped to camp with it. -- S.F. Examiner, August 11

1889 - Northern and Eastern Counties

Great forest fires are raging in the northern and eastern counties.

-- S.F. Examiner, August 11

1889 - Mariposa County

August 12. The fire near the Big Tree Grove (Wawona) is under control. Reinforcements and a strong force of men camped with it and formed a night patrol. -- S.F. Examiner, August 13

1889 - Butte County

August 13. Brush fires are burning in many places near town (Oroville). This afternoon it swept over the cemetery destroying woodwork and shrubbery on the ground. The fire is still burning but a large force of men are fighting it. Much damage is already done. This town is in no danger unless high winds come up.

-- S.F. Examiner, August 13

1889 - Butte and Yuba Counties

August 13. The fires which are raging in the vicinity of Bangor are something fearful. They commenced in Yuba County and burned steadily three days sweeping everything, orchards, houses, barns, fences, trees and so forth. A stretch of country ten miles long and two and one-half miles wide is a charred mass.

-- S.F. Chronicle, August 21

1889 - Tehama County

August 14. About 4,000 acres of timber land was burned over by a fire near Hunters, Tehama County. The origin of the fire was due to carelessness with a camp fire. One man could have suppressed the fire in a few hours during the first few days.

-- Alva Tracy

1889 - San Diego County

August 15. Yesterday morning a fire started in Cajon Valley from a point on the Cayuma railroad near Cowles station and burned over a strip of country 10 miles long and ranging from one half to one mile in width. The fire burned very rapidly ....

-- S.F. Examiner, August 16

1889 - Los Angeles County

August 15. There is a large brush fire in the Arroyo Seco burning at Garvanza four miles south of this city (Pasadena). Two Santa Fe railroad bridges and a wagon bridge are in close proximity to the fire and it is reported that they can not be saved.

-- S.F. Examiner, August 16

1889 - Mountain Country from British Columbia to Mexico

From Missoula Daily Gazette - August 16, 1889:

The Mountain Country from British Columbia to Mexico all in a blaze.

St. Paul special: There is a little hinting in the smiling exterior of these beautiful summer months of the fearful devastation that is going on throughout our Western territory. If fire or flood were to consume daily, in our thickly settled states, property to the amount of hundreds of thousands, and if this loss were continuous and the cause of it beyond check, it would be the prevailing sensation. Yet destruction on that gigantic scale is taking place daily, and we are powerless to apply a remedy. From the northernmost boundary of British Columbia to the Mexican line, the broken mountain region is all in a blaze. Forest fires are always frequent at this season, but they have

seldom been known of such vast extent and such disastrous quality as of the present year. From the eastern line of the Rockies to the Pacific coast stretches our one great remaining timber reserve. The flanks and shoulders of our mountain heights are covered, and the valleys between them filled with dense woodland growths which become, on the western slope, the famous forests of the Pacific. There is a timber supply here for generations to come. There are untold millions of wealth in these boundless expanses of unbroken woodland. And it is these resources for the future and these previous stores of wealth that are now being wasted daily by a tremendous devastation.

The latter part of the dry season upon the Pacific slope is always marked by forest fires more or less extensive. The entire absence of rain over long periods presents a predisposing condition. Every year the forest fire leaves its marks upon the timber growths of the Rockies. But this year its destruction is unparalleled. To the north, almost the entire extent of that vast mountain sea which, under different names is included within the Rocky system, is alight. For hundreds of miles the traveler finds the near mountain shut from his view by a heavy smoke-pall, and runs for hours between masses of tree trunks scarred and still smoldering. At short intervals he comes upon the grander spectacle of the flame in all its fury blazing fiercely to the heavens, sending its writhing fire serpents climbing quickly to the summits of lofty pines, and running from point to point, and from thicket to thicket with a force and rapidity that seems to make resistance hopeless. The same spectacle meets him everywhere. The heights of the coast range are fire crowned. The wooded valleys of California are ablaze. Montana and Idaho are like great charcoal pits. The heights of Colorado are brilliant with flame. Millions of acres of the finest timber have already been destroyed within our boundaries. Millions more must fall before the autumn rains, still months distant, can quell the mighty destroyer.

It is time that we set about protecting against this annual conflagration our remaining woodlands. It can be done only by unceasing vigilance on the part of local communities. It is impossible to prevent fires from starting, for they are due not only to the carelessness of the hunter and tourist, but the locomotive as well. Any passing train may start a fire center destined to cover thousands of miles. But a reasonable supervision along railway lines and routes of ordinary travel, would keep the mischief within ordinary limits. You can do nothing with a great mountain which is all ablaze. But you can set a limit to the area which such a conflagration is permitted to conquer. These new communities have been both indifferent and unequal to the task thus far. But they are losing rapidly one of their most precious possessions. Unless something is done a vast blackened belt will soon cover the western country from Canada to Mexico, marking the

sepulcher of a mighty national resource. It is time that the States of the Northwest and the country take measures to preserve their forests from a destroyer whose ravages are becoming each year more serious and more irresistible.

1889 - Los Angeles County

August 16. Extensive forest fires prevailed on the hills east of this city (Los Angeles) during the day.

-- Monthly Weather Review, page 219

1889 - Butte County

Brush fires on the lava beds near town (Oroville) Saturday destroyed timber and fencing valued at \$1000 also all the fences and wood structures in the Protestant and Catholic cemeteries worth probably \$1000.

-- S.F. Examiner, August 19

1889 - Sonoma County

August 19. A fire broke out in the Sonoma mountains about noon today and did considerable damage before it could be extinguished.

-- S.F. Examiner, August 21

1889 - Butte County

A special from Oroville to the Evening Bee (Sacramento) says, a correspondent writes from Bangor, Butte County, .... that the forest fires raging in that vicinity are something fearful. The fire commenced burning last Tuesday in Yuba County and burned steadily for three days sweeping everything before it, rushing madly over farms, through orchards and licking houses, barns, fences and trees down like so much dry grass .... A strip of country ten miles long and two and one half miles wide is one blackened and charred mass. By the greatest exertion of men from Moor's Station and from Bangor and Challenge Mills the fire was at last suppressed and the village of Bangor and Leaches Lumber Flume was saved from ruin. This has been a remarkable season for forest fires. They have been raging for the last two months all over the country.

-- S.F. Examiner, August 21

1889 - Plumas County

September. A fire burned over an area extending from Last Chance Valley to Genesee Valley, a distance of about forty miles. The fire was fifteen miles in width. The origin of the fire was due to carelessness with a camp fire. -- M. Guidici

1889 - Sonoma County

September 2. Heavy damage was caused to timber claim holders by forest fires in the Guernville lumber district.

-- S.F. Chronicle, September 3

1889 - Nevada County

September 2. A forest fire occurred east of the Empire Mine near Grass Valley. -- S.F. Chronicle, September 3

1889 - Solano County

September 2. A fire started in the canyon about four miles from Vacaville today and burned over a large stretch of territory. Much valuable timber has been destroyed. A large force of men are at work fighting the fire. -- Morning Oregonian, September 3

1889 - Nevada County

September 3. Great forest fires are burning on three sides of the city (Grass Valley) but several miles out. Much fencing and valuable timber have been destroyed. Today the sun is obscured by smoke and fires are reported from half a dozen points. Not a few fires have their origin in malice and farmers have adopted the shot gun policy.

-- S.F. Examiner, September 4

1889 - Fresno County

Further complaint of the wholesale destruction of the timbered forest by sheep herders .... throughout the state are being made every day. C. M. Dabney of Fresno arrived in the city yesterday for the purpose of making known the damage done to the mountain forests of that section of the country by the herders having in charge the roving bands of sheep in search of feed .... He says the sheepmen come up into the mountains .... to procure feed for their sheep. After they have cleaned up the pasture they go down to the valley again leaving the forest behind them on fire, trees falling and blocking up the trails behind them .... On a part of the land of the Emma Nevada Mill site I counted over 2,000 burned and fallen trees .... The old trail between the Northfork mining district and Bishop Creek was covered with fire and fallen trees until a few days ago when a heavy rain extinguished the blaze. Men arriving from the North Fork of the San Joaquin state that from Snow Canyon to the river the whole country had been set on fire by the sheep herders.... The burning of these forests by the herders is the greatest calamity of the state .... The North and South Forks of the great tributaries of the San Joaquin river in a few years will be dry. The snow has disappeared from the west side of the Minarets. In previous years these snow banks a mile long and 40 feet deep were perpetual. The streams from this great watershed are today lower than they have been for 30 years. There seems to be a combination of sheepmen, mostly Portuguese, who pay no taxes, have no homes, defy our laws and who say they do not understand English to burn these magnificent forests as they go along. Every year they start fires as they leave the mountain forests for the purpose of cleaning them out and preparing fresh pasturage for the next year. The weight

of the fresh snow coming on fells the half burned trees and the sheepmen set fire to them as they lie on the ground thus burning the young shoots springing up. The consequence is the destruction of the great forests .... and the drying up of the water shed. If the Board of Forestry have subagents throughout the State to prevent forest fires why don't they send men of intelligence to follow the sheepman. My suggestion is for the people at large in Fresno County to commence suit for \$50,000 against every sheep owner and hang the Portuguese herders as they arrive from the mountains in Fresno Flats, Madera and Fresno City. The coming year 1890 freshets may be expected in the San Joaquin. It is said that no agency except Forests can hold back the rains in the mountains.

-- S.F. Examiner, September 5

#### 1889 - California

September 5. The agents of the State Board of Forestry have been investigating the prevalence of forest fires in California, but have not discovered the supposed incendiary. The evidence secured, however, points strongly towards sheep herders as the wrongdoers, but no positive information has been found regarding the guilty person. --- Morning Oregonian, September 6

#### 1889 - Placer County

September 12. A fire has been raging in the mountains near Cascade for three or four days. The railroad men have been fighting it with two fire trams but this morning it got beyond their control and burned 200 feet of the bridge of Deep Gulch about three fourths of a mile west of Cascade. It is also burning in the snow sheds.... -- S.F. Examiner, September 13

#### 1889 - Nevada County

September 13. Forest fires have been raging in the Sierra Nevada Mountains in Nevada County for several days. The Central Pacific Railroad bridge at the upper Cascade was destroyed yesterday together with a mile of snowsheds. Overland passengers are being transported across the canyon. -- S.F. Chronicle, Sept. 14

#### 1889 - San Mateo County

September 13 to 20. The most terrible forest fire in many years raged for several weeks in the southwestern part of San Mateo County. It commenced in the vicinity of San Andreas Lake, burning several houses and several hundred acres of land. At intervals during the ten day period the fire broke out several times. On the 23rd a fire started from a spark from a sawmill in the coast range mountains southwest of Belmont, San Mateo County and spread rapidly in the redwood timber. On the 24th of the month it again threatened the mill, consuming 2,000 feet of lumber and the com-

pany's offices. It destroyed residences, school houses, barns and approximately 10,000 acres of land were burned over. A large number of men fought the fire day and night to prevent its spread as much as possible. Considerable damage was done to the Spring Valley Water Company's property, 10,000 feet of flume having been burned. The origin of the first fire was reported to have been due to hunters.

-- S.F. Chronicle, Sept. 25, 26 and 29

September 16. Fire broke out in the grass and brush of the San Andreas Valley near the lakes of the Spring Valley Water Co. on Sunday. It started at several different points and spread forming two large fires; one being located in the valley on the ridge between San Andreas Lake and the new Crystal Spring Lake while the other burned over the ridges on the west of San Andreas Lake. The fire between the lakes has burned about 6,000 feet of flume belonging to the water company and also a house and two stables on the Drinkhouse ranch .... Men have been fighting the flames since Sunday Morning .... The fire is supposed to have originated from the camp fires and guns of hunters ....

-- S.F. Examiner, September 17

September 17. The fires though still burning fiercely in the hills are reported to be well under control and no further serious damage is now anticipated. The hills for miles around are blackened .... The advance of the fire toward San Mateo was checked early and yesterday all the available men were engaged in fighting it away from Spanishtown and the redwood forest. The line of fire today was about six miles from San Mateo and 40 men were battling to keep it back. There has been no wind and the fire does not advance rapidly. There is no timber in the burned country but the brush makes a hot fire and the blazing dry grass lights up the hills at night as bright as day ....

-- S.F. Examiner, September 18

#### 1889 - San Bernardino County

September 16. Forest fires have been prevailing here for two days. The mountains on the north in a dozen places are ablaze and it is feared much valuable timber will be destroyed. Already considerable damage has been done in the valley.

-- S.F. Examiner, September 17

#### 1889 - Ventura and Los Angeles Counties

September 16. Today has been the hottest day of the season, the hottest recorded temperature being 103° (Los Angeles). This is largely due to burning brush and weeds in the vicinity. Passengers from the north report patches of fire along the Santa Barbara branch of the Southern Pacific from Saticoy to Sanger and along the main line as far south as San Fernando. -- S.F. Examiner, Sept. 17

1889 - Santa Barbara County

September 16. A large mountain fire has been raging today on the mountains about ten miles north of this city (Santa Barbara) It is not known yet whether any damage has been done beyond burning timber undergrowth and grass. -- S.F. Examiner, September 17

1889 - Sierra County

September 17. Reports today from Forest City say that the town is endangered by fire in the woods which at last account are burning within a few hundred feet of the town.... Forest fires have been raging since the 6th instant on the ridge between North Bloomfield and Graniteville in this county and have swept over several thousand acres of woodland and destroyed much timber and fencing. Some small buildings have also been destroyed. It is now spreading towards Bloody Run where the trees and undergrowth are exceedingly dense. Since yesterday the fire that originated at Chalk Bluff has swept two miles in a northwesterly direction and much alarm for the town of You Bet is felt. The citizens of Red Dog saved their little town by back fires. -- S.F. Examiner, September 18

1889 - Nevada County

September 17. A forest fire at You Bet, Nevada County, last night was the worst ever seen in the mountains. The flames ran up the tops of the tallest pines. The flumes in the great water canals are in danger. Men are trying to get it under control by back firing. -- S.F. Chronicle, September 18

1889 - Nevada County

September 17. This morning a barn and a ton of hay, a wagon shed and wagons on a farm in Nevada County were burned owing to forest fires. -- S.F. Chronicle, September 18

1889 - San Bernardino County

September 17. The bush fires are still raging nine miles from San Bernardino. Nine houses and several hay stacks have been burned thus far. -- S.F. Chronicle, September 18

1889 - Sierra and Nevada Counties

September 17. Reports from Sierra City, Sierra County, state that the town is endangered by fire in the woods, which was burning within a few hundred feet of the town, necessitating many families and mining companies to move property out of town.

A forest fire has been raging since the 6th of September on the ridge between north Bloomfield and Graniteville, Nevada

County, and has swept over several thousand acres of woodland and destroyed much timber and fencing and small buildings. It is now spreading toward Bloody Run where the trees and undergrowth are exceedingly dense.

Since yesterday the fire that originated at Chalk Bluff has spread two miles in a northwesterly direction. The citizens saved their little town by back firing. -- S.F. Chronicle, Sept. 18

#### 1889 - Sonoma County

The mountain ranges southwest of Sonoma are on fire. The flames leaped over on this side last night illuminating the skies brightly .... The damage will be considerable to pasture and timber .... The farmers of that section sent to town for help and a body of men went out to fight the fire.

-- S.F. Examiner, September 17

#### 1889 - Santa Clara County

A fire is raging in the woodland heights west of Gilroy. It has already done considerable damage to Trumbleys and other ranches and destroyed bridges on the public roads. It is fast advancing from Glen Riddel over the hill to Mount Madonna. A squad of men started from Miller's ranch tonight to check its progress. Early this morning the fire was dangerously close to groves of valuable redwood .... The fire was started by quail hunters.

-- S.F. Examiner, September 17

#### 1889 - Santa Cruz County

September 17. The forest fire near this place (Santa Cruz) is spreading rapidly though every effort is being made to check it. It is approaching the Glenwood Lumber Company's saw-mill. The railroad buildings are out of danger.

-- S.F. Examiner, September 18

#### 1889 - San Bernardino County

September 17. The brush fires are still raging on the prairie 9 miles from town (San Bernardino). Nine houses and several hay stacks have been burned thus far but no further damage is apprehended. -- S.F. Examiner, September 18

September 17. The forest fires continue in many parts of the county but seem to be abating. Scattering reports come in of houses and barns being burned and much grain that was thrashed and piled in the field in sacks. The fire is now in the eastern part of the county on the Simi and Las Pasas ranches and doing much damage. Conservative estimates place the loss at over \$50,000.

-- S.F. Examiner, September 18

1889 - Sonoma County

September 17. Forest fires in the surrounding mountains (Santa Rosa) have made the weather almost unbearable.

-- S.F. Examiner, September 18

1889 - Sierra County

September 18. A forest fire has been raging in the mountains surrounding this place (Forest City) for two days, the town having had a narrow escape. No serious damage has been done except two miles of flume belonging to the Bald Mountain Extension Company being burned. The fire is now under control unless a high wind springs up no damage is apprehended.

-- S.F. Examiner, September 19

September 18. Downieville continues enveloped in smoke. There was a narrow escape of the Forest City Extension Ruby buildings. The fires are somewhat under control after hard fighting day and night. The battle still rages and water is very scarce in the mountains.

-- S.F. Examiner, September 19

1889 - Nevada and Sierra Counties

September 18. There was a forest fire in Little York township this afternoon but it was gotten under control. The Bloody Run fire is raging unabated but no improved properties are endangered. The atmosphere all through the middle foot hills of this county are so laden with smoke that one can not see more than half a mile in any direction. -- S.F. Examiner, September 19

1889 - Mendocino County

September 18. While no forest fires are known to be raging in this vicinity (Ukiah) so dense is the smoke in the valley that objects are not visible short distances away. The sun looks like a globe of copper. -- S.F. Examiner, September 19

1889 - Sierra County

September 18. A forest fire has been raging in the mountains surrounding Forest for two days, the town having a narrow escape. Two miles of flume belonging to Bald Mountain Gold Mining Company was burned. -- S.F. Chronicle, September 19

1889 - Sierra County

September 18. Downieville continues enveloped in smoke. There was a narrow escape for the Forest City and Extension Ruby buildings. The fires are somewhat under control after hard fighting day and night. The battle still rages and water is very scarce in the mountains.

-- S.F. Chronicle, September 19

1889 - Nevada County

September 18. This afternoon the forest fire in Little York township was checked. The Bloody Run fire is still raging unabated, but no improved properties are in danger. The atmosphere all through the middle foot hills of this county is so laden with smoke that one cannot see over half a mile in any direction.

-- S.F. Chronicle, September 19

1889 - Ventura County

September 19. Forest fires continue in many parts of the county, but seem to be abating. It is hard to get details. Scattered reports come in of barns and houses being burned. The fire is now in the eastern part of the county on the Simi and Las Poses Ranches and doing much damage. Conservative estimates place the losses so far at over \$50,000. -- S.F. Chronicle, September 18

1889 - San Mateo County

The great fire in the San Mateo hills has burned out. For miles the hills that were green and grassy are now black and bare. In some of the gulches where oaks and redwoods have escaped the woodchopper the fire is still smoking and smoldering but its progress has been arrested.... It may be weeks before the fire is completely out .... The fire has been burning since Sunday (four days) and at a rough estimate burned a mile and a half square daily.

-- S.F. Examiner, September 19

1889 - San Diego County

September 21. A destructive fire has been raging in Jamul Valley during the past week and has destroyed several houses and barns .... H. Q. Jereuld and Thomas Rechie and three children who were driving across the valley were overtaken by the flames. They left the wagon and escaped through the flames without serious injury. The team was burned to death and the wagon completely destroyed ....

-- S.F. Examiner, September 22

1889 - Napa County

September 24. Some grape pickers left their camp fire burning .... about three miles from town (Calistoga) which with the gale soon caused a disastrous fire which spread over a great area probably 2,000 acres of hill and valley land .... Many miles of fencing was destroyed, also much timber and pasture ...

-- S.F. Examiner, September 25

1889 - Sonoma County

September 24. Fierce forest fires have been raging for 8 or 10 hours past in Los Guilicos Valley .... The ranchers of

the neighborhood are out in full force fighting the flames ....  
The country is very dry and the least spark is not unlikely to produce a destructive conflagration. About 100 men fought the fire all night until 2 PM when they sent for additional help from Sonoma ....

-- S.F. Examiner, September 25

#### 1889 - San Bernardino County

September 24. There was a north wind all day and early this morning a fire broke out in the mountains north of here (San Bernardino) which has been raging all day and tonight. This great valley is lighted by its reflection. The fire is in Waterman Canyon and is likely to do some damage.

-- S.F. Examiner, September 25

#### 1889 - Sonoma County

September 24. Forest fires in Los Gulicos burned for two days. About 100 men fought them all night until 2:00 A.M. when they sent for aid from Sonoma. It was shortly afterwards gotten under control. 1,000 cords of wood were destroyed.

-- S.F. Chronicle, September 25

#### 1889 - Orange County

September 24. About twenty-five miles of the mountains east of Santa Ana are on fire tonight. The fire originated in Santiago Canyon in a herders' camp. 3,000 sheep are reported burned. Several hundred cattle are dead and dying. So far \$10,000 will not cover the damage to pastures alone. This evening the wind sent the flames onto the Rawson range and they are doing great damage east and south of El Toro.

-- S.F. Chronicle, September 25

#### 1889 - San Mateo County

September 25. The fires which the Spring Valley employees started to burn the brush got beyond control this morning and burned over 1,000 acres west of Crystal Springs Lake endangering the school house and several residences .... Three miles of fence destroyed .... Intelligence just received says extensive fires commenced raging last night in the redwood forest near Purissima. Today the fires are spreading throughout the Borden and Hatch and several other tracts and several saw mills are in danger. It is believed the experience of a few years ago will be again undergone. Great damage has already been done and there is no hope of checking the flames.

-- S.F. Examiner, September 25

1889 - San Mateo County

September 25. One of the most destructive fires of the season is now raging in the mountains west of Redwood City, San Mateo County. It started on the coast side near a mill (probably near Purissima). 250,000 feet of lumber were reported lost, also a residence and a large amount of wood and pickets. The loss of trestle work and standing timber is great, but cannot now be estimated. Several sawmills are in danger. It is feared the experience of a few years ago may be repeated. There is another fire near La Honda, San Mateo County. Both fires are said to have been started by careless hunters. -- S.F. Chronicle, Sept. 26

1889 - San Bernardino County

September 25. Forest fires are again devastating the timberland in the mountains. Damage to a bee ranch in the foot hills is feared as well as the loss of timber in the county.

-- S.F. Chronicle, September 26

1889 - Marin County

September 25. Sparks from a passing train set fire to the brush at the Corte Madera Depot. The fire soon spread and reached the heavy timber in the mountains where it raged fiercely.

-- S.F. Chronicle, September 26

1889 - Santa Clara County and Santa Cruz County

September 25. Mountain fires coming from the Watsonville side devastated timber and other property on the Santa Cruz range of mountains west of Gilroy. The fires were started by hunters or campers. Much underbrush was burned and great damage done to redwood, tanbark oak and other trees of the range north and south of the Watsonville road over the summit.

-- S.F. Chronicle, Sept. 26 & 27

1889 - Sonoma County

September 25. The forest fires that have been raging in the Los Gullicos Valley have been checked. There are, however, fires in the timber regions along the coast and the atmosphere is quite heavy.

-- S.F. Chronicle, September 26

1889 - San Mateo County

September 25. The residence and improvements of a ranch on the summit of the coast range were burned by forest fires. Other houses are supposed to have been burned. The fire is spreading south.

-- S.F. Chronicle, September 26

1889 - Orange County

September 25. The fire in the mountains east and south of Santa Ana has run its course. The damage to livestock is not as heavy as reported. Tonight the mountains are illuminated in spots all the way to San Diego in San Diego County showing the vast scope of country which has been swept over by the flames.

-- S.F. Chronicle, September 26

1889 - San Mateo County

September 25. One of the most destructive fires that has occurred in this vicinity and one that has spread over a large stretch of territory is now raging in the hills about this place (Redwood City). It started near Borden and Hatch's lumber mill at the foot of Purissima Canyon on Monday last but did not appear until today on this side of the mountains. The residence of Mrs. Phil Kruss at the head of Purissima Canyon was completely destroyed as well as a large amount of wood in the gulch near the house. Borden and Hatch are reported to have lost over 25,000 feet of cut lumber .... The fire made its appearance on this side at noon today (Wednesday) and .... aided by a westerly wind has made great headway crossing over Canyada Valley and is now in the foothills above Britton's place near here. Another fire is raging near La Hunda but little news can be gleaned of its destructiveness. The cause of the fire is unknown but several claim it is due to the carelessness of hunters .... If something is not done towards stopping the fire .... fences and barns near here will surely be destroyed.

-- S.F. Examiner, September 26

1889 - San Diego County

September 25. A fire which threatened the city (San Diego) this morning started yesterday from Lianda Vista .... At 10:30 this morning a telephone message from the poor farm stated that the fire had crossed San Diego river. Assistance was at once sent to rescue the inmates. It was found that three loads of women had already been removed. A sudden change in the wind enabled the fire to be stopped and the poor farm saved. The fire burned to the edge of the city and only by the exertion of the fire department was San Diego saved .... The entire city park tract was burned over .... The tract burned over is about 18 miles long and from 5 to 8 miles wide ....

-- S.F. Examiner, September 26

1889 - Orange County

September 25. Serious results are reported from the great foot hill fire tonight. Charles Baker, a rancher living

up Santiago Canyon rode into Orange with a team and a hive of bees in his wagon. While driving over the burned district the hind end of the wagon was burned off and the bees consumed. One horse expired shortly after leaving Orange and the other is in a serious condition. The man is also badly scorched. ...

— S.F. Examiner, September 26

#### 1889 - Santa Cruz County

September 25. Mountain fires are again devastating the timber and other properties in the Santa Cruz mountains .... This time the fires come from the Watsonville side .... due to carelessness of hunters and campers. Present appearances indicate that the loss will be of considerable magnitude.

— S.F. Examiner, September 26, 1889

#### 1889 - Butte County

September 25. Terrible forest fires are raging around Table Mountain north of town (Oroville) since yesterday .... much timber, fencing, etc., have been destroyed. The fire is still burning.

— S.F. Examiner, September 26, 1889

#### 1889 - Sierra County

September 25. This afternoon extensive forest fires are raging three miles south of Downieville. ...

— S.F. Examiner, September 26, 1889

#### 1889 - San Diego County

September 25. A fire on the Mesa north of San Diego today came very near doing an immense amount of damage. Driven by strong north winds it reached the edge of the city through Switzer Canyon and destroyed several hundred stands of bees and several miles of fencing.

— S.F. Chronicle, September 26

#### 1889 - Butte County

Terrible forest fires are raging around Table Mountain north of the town of Oroville. Much timber, fencing, etc., have been destroyed. The fire is still burning.

— S.F. Chronicle, September 25

#### 1889 - San Bernardino County

September 25. Forest fires broke out on the Santa Ana River, which threatened the bridges across the river at Colton.

— S.F. Chronicle, September 26

#### 1889 - San Diego County

September 25. Eighteen miles of mesa and valley land

have been burned over by a fire which started at Linda Vista yesterday. The flames swept down Switzer Canyon, burning the ties and bridges of the Park Belt Line and endangering houses on the outskirts. The progress of the fire is in the eastern portion of Florence Heights where many residences stand. The wind was so brisk that the flames leaped fifty feet into the air. The fire was started by a rancher burning brush.

-- S.F. Chronicle

#### 1889 - Plumas County

September 25. The fire (near Spanish Ranch) is partly under control. One firm lost 300,000 feet of lumber besides their offices and buildings. Thousands of acres of pasture and miles of fences were burned yesterday in the county.

-- S.F. Chronicle, September 26

#### 1889 - Santa Barbara County

September 26. During the past week forest fires have done great damage to the upper part of Santa Barbara County where fully \$200,000 worth of property in the way of timber and feed has been destroyed. -- S.F. Chronicle, Sept. 27

#### 1889 - Santa Clara County

September 26. A fire has burned much of the underbrush and done much damage to redwood, tanbark oak and other trees of the range north and south of Watsonville road over the summit, and numerous settlers and land owners have suffered losses in wood, feed, fences and other property. One man lost four hundred cords of stove wood and several thousand pickets. Another man lost a barn, considerable hay and a mill on his place. Settlers are fighting the fire and checking its progress, but should high winds prevail great damage will be done.

-- S.F. Chronicle, September 27

#### 1889 - San Mateo County

September 26. The mountain fire is still raging fiercely. It has extended down to the canyon and cleaned out a space of several miles. Pastures are destroyed and fences burned. One barn containing 125 bales of hay and a lot of machinery was consumed. Hundreds of cords of wood and several bridges were lost. The fire has turned back up the mountains and is burning furiously.

-- S.F. Chronicle, September 27

#### 1889 - Santa Barbara and Orange Counties

September 26. Grass fires in this vicinity (Santa Ana) have destroyed much valuable property. The beautiful picnic grounds of Santiago Canyon (the pride of Madam Modjeska, the

well-known actress) are entirely consumed. Those picnic grounds have been a popular resort for many wealthy eastern people as well as many prominent actors who were attracted here by the magnificent home of the above party. In the upper part of Santa Barbara County it is estimated that \$200,000 worth of property including timber and feed has been destroyed during the past week.

-- Morning Oregonian, September 27

#### 1889 - San Diego County

September 26. For the past day or two forest fires have been raging near Escondido, San Diego County, and today the strong wind carried the flames to the city of San Diego. The fire is nearly up to the woolen mills. Two residences are in flames. There is another fire on the south side of San Diego City and clouds of smoke are coming towards the company's stables. Fears are entertained for the safety of this town. People are blinded with smoke and it is believed that some houses are burned to the ground. All the Riversils ranch has been swept by the flames, including barns, feed and thirty cords of wood. In fact there is nothing left but ashes. -- S.F. Chronicle, September 27

#### 1889 - San Diego County

September 26. For the past day or two forest fires have been raging near Encinada and today a strong wind carried the flames onto the city .... There is another fire on the south side of this city (San Diego) .... Fears are entertained for the safety of this town ....

-- S.F. Examiner, September 27

#### 1889 - San Mateo County

September 26. Two of the recently great fires in the hills of San Mateo county still continue to destroy. The fire that came this way across the mountains from Purissima valley continued to the Canyeda which lies south of Crystal Springs. Leaping across the valley it picked out the huge barn on the Burke estate for destruction. It then continued up the hill to the property of ... Phelps and Bretton ... Phelps and a force of volunteers from Belmont fought the flames all Wednesday night and arrested the progress of the fire ... The fires seemed to be running back over the hills from whence it came. The La Hunda fire is still raging. The fire near Lawrence's west of Crystal Lake has been extinguished.

-- S.F. Examiner, September 27

#### 1889 - Orange County

September 26. The fire which has been burning for the past two days (near Santa Ana) still continues in the canyons. The burning and burned district now extends 100 miles from north

to south and is from ten to eighteen miles in width. Over \$1,000,000 worth of pasturage and timber has been destroyed.  
-- Monthly Weather Review, page 252

#### 1889 - Santa Barbara County

September 26. It is estimated that \$2,000 worth of property including timber and feed has been destroyed during the past week.  
--- L.A. Times, September 27

#### 1889 - Orange County

September 26. The devastating fire still continues in portions of the canyons. The burned district now extends 100 miles from north to south and 10 to 18 miles in width. Much pasture and timber has already been consumed by the flames. At San Juan Capistrano last night great danger was experienced in keeping a fire from the heart of the city ....

--- S.F. Examiner, September 27

#### Memorandum

I was living in Orange County at the time and well remember the great fire reported herein from September 24 to 26. Nothing like it has occurred in California since the National Forests have been administered. In fact in my 33 years in the Service I have never seen a forest or brush fire to equal it. This one covered an enormous scope of country and burned very rapidly.

--- L.A. Barrett

#### 1889 - Siskiyou County

September 26. The following is taken from the third biennial report of the California State Board of Forestry, pages 118 and 119.

Determined upon visiting the home of the lately discovered and solitary Spruce, we proceeded to the vicinity of the Siskiyou Mountains, arriving September 26, 1889, at Cole's Station, to find the canyons all ablaze with fire and filled with smoke. There was no alternative but to pass on through the stifling smoke, a blazing tree ever and anon crashing beside the sweeping train. ... In October we found the forest fires so far lessened as to warrant the hope for successful examination of the Siskiyou Mountains in detail. ... Disposing of the wagon in the corral of a pioneer farmer, and saddling our horses, we started out in the gray of the early morning, taking the trail towards "Happy Camp". -- J. G. Lemmon

1889 - Santa Barbara County

September 27. Extensive fires have been raging today and tonight in Sycamore and Cold Spring Canyons to the east of town.

--- S.F. Examiner, September 28

1889 - Santa Cruz County

September 27. The fire has destroyed much of the under-brush and caused much damage to redwood, oak and other trees on the west range. North and south of the Watsonville road over the summit ... settlers and land owners have suffered losses in wood, feed, fences and other properties. Settlers are fighting the fires ...

--- S.F. Examiner, September 28

1889 - Los Angeles County

A man named Thrall narrowly escaped burning by the forest fire in Crecinta Canyada this afternoon ...

--- S.F. Examiner, September 28

1889 - San Mateo County

The fire that was nearly stopped started again today. The smoldering redwoods were fanned by southerly breezes and the fire went down the mountain to the upper canyada burning a district about three miles in length and a mile and one half in width.

--- S.F. Examiner, September 28

1889 - San Diego County

September 30. News is just received that a man was surrounded by brush fires at Potrero, San Diego County, California. He became crazed by the intense heat and rushed into the burning brush, where he was literally roasted alive. A great deal of damage is done by these brush fires, which sometime result in large forest fires.

--- Morning Oregonian, October 1, 1889

1889 - Tehama County

Forest fires were reported in various parts of the surrounding country (Red Bluff) on nearly every day during the month.

--- Report of John J. McLean, Observer Signal Corps, Monthly Weather Review, September

1889 - Siskiyou County

About 1200 acres were burned near Black Bear in Siskiyou County. The fire was set by an incendiary who left the country. \$1500 was spent by John Daggett to save his property at Black Bear.

--- John Daggett

### 1889 - Tuolumne County

During the summer of 1889 a fire started a half mile above Strawberry on the Mono Road. It burned to Leland Meadows and to the head of Cow Creek, crossed the Stanislaus River at Bearsley Flat, ran westerly to Soap Creek and to the lava ridge east of Dry Meadows. It was a big fire and burned over probably 20,000 acres of heavily timbered country. It was caused by workmen on the Mono Road burning a log out of their way.

-- Edward Jenness

### 1889 - Siskiyou County

The most severe fire that has occurred since white men settled here occurred at Forks of Salmon (Klamath National Forest). It burned 20,000 acres.

-- C. G. Smith

### 1889 - Tuolumne County

A fire started in the late summer of 1889 on the trail between Strawberry and Old Strawberry. It ran to the Stinchfield place, up the North Fork of Tuolumne River to above the Bells Meadow road, around what is now Pine Crest, south towards Dodge Ridge, to Shearing Camp Creek and down the North Fork of Tuolumne to the first wet gulch above present site of the Cold Springs Mill. It was about 30,000 acres in extent and was caused by sheepmen.

-- Edward Jenness

In the fall of 1889 a fire burned the territory above Donnells Flat. It burned around Long Bridge and down the Patterson Grade, covering about 1,000 acres of timbered land.

-- Edward Jenness

### 1889 - Siskiyou County

A fire started near Forks of Salmon River and burned all the country back to Salmon Summit. Area about 16,000 acres.

-- Wm. Balfrey

### 1890 - San Diego and Orange Counties

June 14. A report from Lower California of a disastrous fire raging for several days, started in the vicinity of Santa Rosa 12 miles north of Encinatos, San Diego County. Crops, fences, hay, timber along the canyons east of Santa Rosa made food for the flames and were not subdued till they reached Flowers ranch in the Guadalupe, 24 miles from the starting point. The ranchers suffered severely in the loss of crops. The fire swept off from the canyon

to Eloro, Orange County. San Antonio ranch was next stripped. Others lost houses, crops, etc. The damage is at least \$20,000, perhaps \$25,000. The origin of the fire is thought to have been Indians hunting for honey. -- S.F. Chronicle, June 15

1890 - Madera County

June 14. For several days a fire has been burning over the foothills along and just south of Fresno River, near Bates. Some 17,000 acres have been burned over doing great damage to feed and timber. At one time several barns and dwelling houses were in great danger. The fire is still burning.

-- S.F. Chronicle, June 15

1890 - San Luis Obispo County

July 3. Grass fires have destroyed thousands of acres of pasture on the hills east of here (Templeton).

-- S.F. Chronicle, July 4

1890 - Butte County

July 19. Heavy forest fires are raging in the foot hills east of here (Oroville) and much damage is being done.

-- S.F. Examiner, July 20

1890 - Nevada County

July 21. Yesterday afternoon a fire broke out near the Alluison place, south of here (Grass Valley) and James Looney, aged about 70, was burned to death. The old man was fighting the fire in front and some person set a back fire in the rear not knowing he was in the front. He was soon overcome by the heat and smoke and perished. -- S.F. Chronicle, July 22

1890 - Butte County

July 21. Springer's sawmill on Brush Creek on the Quincy road, thirty miles from this town (Oroville), together with several hundred thousand feet of lumber, nineteen houses and a large amount of finished stock was destroyed by fire Saturday afternoon (July 21, 1890 was Tuesday). The woods are on fire. -- S.F. Chronicle, July 22

July 22. The Bees Oroville special says: Further information has been received from Brush Creek, the scene of the Springer mill conflagration which occurred last Saturday. One young man whose name is unknown is missing. It is feared that he perished in the flames. The woods for miles around were set afire and are now burning covering the hills with rolling volumes of smoke and flames.

-- S.F. Chronicle, July 23

1890 - Santa Barbara County

July 23. About 9 o'clock last night a fire swept over the hill back of town (Santa Barbara) and into Mission Canyon, taking all the grass and many trees. Two small dwellings and one barn were burned as well as many fences and much pasturage. The fire was caused by boys clearing away brush.

-- S.F. Chronicle, July 24

1890 - Merced County

July 23. Another large fire destroying many thousand acres of grass land prevailed yesterday and today near Merced Falls.

-- S.F. Chronicle, July 24

July 23. The citizens of Merced Falls have been fighting fire for a couple of days. Several thousand acres of sheep feed have been destroyed in that section in that time.

-- S.F. Examiner, July 24

1890 - Los Angeles County

July 24. Louis and Philip Audiget, two young Frenchmen who owned a piece of ground near Newhall, finding a brush fire approaching and threatening their little home started a back fire which got beyond their control and caused considerable loss to neighbors. They believed their act punishable by law with death and concluded to commit suicide. They lay down under a tree and shot themselves in the head. Philip received one wound and Louis three. They thought they made a good job of it but were found Thursday under the tree where they had lain since Wednesday morning with life in them and were taken to Los Angeles County Hospital. Louis will probably die. Philip will recover.

-- S.F. Bulletin, July 25

1890 - Calaveras and Tuolumne Counties

July 25. A fire has been raging since last Saturday (7 days) in the territory bounded by Copperopolis, O'Byrons Ferry and Reynolds Ferry and covering an area of over 20 miles. Large quantities of hay, feed, timber, wood, fencing, with a number of dwellings and barns have been destroyed. The fire has jumped the Stanislaus River and is sweeping the country towards Chinese Camp.

-- S.F. Bulletin, July 26

1890 - Shasta County

July 27. A fire in J. J. Scott & Co. lumber yard, Dunsmuir, burned 1,000,000 feet of sugar pine and yellow pine lumber and all the stables.

-- S.F. Bulletin, July 28

1890 - Stanislaus County

July 28. Immense fires are raging and spreading on the east side of the Coast Range Mountains about 20 miles west of Modesto, Stanislaus County. They were first seen in the south-western direction three days ago and since then they have burned over about 40 miles of timber and grazing lands. The fires are traveling north and at this writing they extend from the base to the summit of the mountain. -- Morning Oregonian, July 29

1890 - Calaveras County

July 28. Another grass and brush fire is burning east of Milton. --- S.F. Chronicle, July 29

1890 - Napa County

July 29. A mountain fire is raging between Napa and Berayessa Valley on the east. There is much danger that it may get down into Berayessa Valley. If it should the loss will be very heavy. --- S.F. Chronicle, July 30

1890 - Sonoma County

July 30. Forest fires have done considerable damage to lumber and dry feed in the northern part of Santa Rosa. Grass is very dry and ranchmen have been so foolish as to attempt to clear the ground of brush and timber by firing it. A very destructive fire near Cloverdale, which burned over several thousand acres had its origin in this way.

--- S.F. Chronicle, July 31

1890 - Nevada County

August 1. A forest fire is raging this afternoon on the ranch of Thomas Chase (near Grass Valley) destroying fences and much fine timber. This fire is five miles away but cinders from it fell in Grass Valley. --- S.F. Chronicle, August 2

1890 - Los Angeles County

August 16. A grass fire is sweeping over the hills and among the stubblefield west of the Bethel Settlement tonight. About 5000 acres are burned over and there is no prospect of putting the fire out. There is no loss of improvements but tonight the worst is feared. The fire is sweeping down towards the settlement. The origin of the fire is unknown.

--- S.F. Chronicle, August 17

1890 - Eldorado County

August 25. A fire started in a field near Latrobe. Eldorado

County, on the Sacramento and Placerville R.R. It burned over 600 acres destroying trees and grass. The trees over the track delayed the train three hours. -- S.F. Chronicle, August 27

#### 1890 - Stanislaus County

The Modesto News states that the whole Coast Range east of Grayson is enveloped in smoke, while flames may be seen there by night. --- S.F. Chronicle, August 27

#### 1890 - Nevada County

September 7. Yesterday morning a forest fire broke out on Milarkey's place ten miles south of Grass Valley and it has burned vast tracts of timber and numerous fences. The barns and houses of the farmers have been saved by hand work. At one time Chicago Park was in great danger. The fire is still raging. This is the most destructive field and forest fire known here for years.

--- S.F. Chronicle, September 9

#### 1890 - Nevada County

September 9. Another big field and forest fire is raging today to the southeast of Grass Valley in the thickly settled neighborhood. Splendid timber has been destroyed.

--- S.F. Chronicle, September 10

#### 1890 - Solano County

September 14. Quite a forest fire is raging in the hills to the west and south (near Vacaville). The fires for the past two weeks have at last awakened the people of this town to a sense of their insecurity. --- S.F. Chronicle, September 16

Quite a large brush fire threatened the cherry orchard of H. Bassford at Vacaville yesterday. Men were sent from town to fight the flames. --- S.F. Bulletin, September 16

#### 1890 - Marin County

October 3. Hunters set fire to the grass in Whites Hills. --- S.F. Chronicle, October 4

#### 1890 - Napa County

October 4. A fierce fire is raging in the redwoods and mountains west of Napa, Napa County. --- Morning Oregonian, Oct. 5

#### 1890 - Sonoma County

October 4. Forest fires are becoming prevalent in this section. One was started this morning in the chaparral hills west of Sonoma Valley. --- S.F. Chronicle, October 5

1890 - Sonoma County

The fire which originated in the Napa Countains near El Varano and extended down into the Sonoma Valley destroyed thousands of acres of pasture, 700 miles of fence and 2000 cords of wood.

-- S.F. Bulletin, October 6

October 6. The forest fire is now completely under control. The fire spread over an area of 12 by 6 miles. The burned district presents a scene of desolation hard to describe. Fences are down, valuable timber destroyed and thousands of acres of feed consumed.

-- S.F. Chronicle, October 7

1890 - Los Angeles, San Diego and Tehama Counties

Reports of the 21st from Los Angeles state that extensive mountain fires prevailed near the Santa Monica Canyon and grass fires on the plains, causing considerable damage.

A report from San Diego dated the 22nd states that brush fires prevailed with hot dry winds from the north and northwest. Forest fires were reported near Red Bluff on the 9th, 10th, 11th, 15th and 25th to 31st.

-- Monthly Weather Review, p. 266 - October

1890 - Marin County

October 24. For the past 10 days forest fire has been raging on the Coast Range Mountains between San Rafael and Bolinas, Marin Co. Over 8000 acres has been burned and the fire is still burning in an easterly direction. Eight bridges on the road between San Rafael and Bolinas have been burned down. The mail is being carried across Mt. Tamalpais by pony express. Over 200 men are engaged in fighting the fire.

-- Morning Oregonian, October 25

October 28. A brush fire started near Olema, Marin County, and is increasing in dimensions, making the situation very alarming. Large forces of men organized to fight the flames but all efforts were unavailing. The heat was unbearable and force of the wind generated by flames was terrific. Indications are strong that the fire will invade Mill Valley and vicinity. Hundreds of tons of hay and several barns have been destroyed. The loss will reach about \$15,000.

-- S.F. Chronicle, October 29

1890 - San Mateo County

November 14. Forest fires are raging in the mountains ten miles west of Redwood City, San Mateo County, and about 8 square miles have been burned over. Farm houses, barns and outbuildings were burned to the ground entailing a loss of \$1,200. The fires are supposed to have started from burning brush.

-- S.F. Chronicle, November 15

1890 - Santa Cruz County

November 20. Two immense fires are raging in the woods north of Santa Cruz, Cal. One at Cave Gulch 4 miles off and the other at Bonne Doon. Many men are out fighting the fires but cannot get them under control. -- Morning Oregonian, Nov. 21

1890 - Santa Barbara County

The ridge westward from Tofotopo Bluff severely burned.  
--- E. A. Sterling

1890 - Siskiyou County

Fire burned over the greater part of the head of West Fork of Eddy Gulch. (Klamath National Forest) --- Robt. Finley

1890 - San Diego County

Interview with Geo. W. Cook and Theo. O. Bailey, of Nellie P.O., Smith Mountain, residents of over 25 years:

"Since the burning and cutting following settlement, numerous large springs have entirely ceased. One in particular (in Township 10 South, Range 2 East, Section 18, on Smith Mountain) where previous to fires (3 successive years) a plentiful supply of water always ran for 4 miles below the spring. Since fires it never runs over 150 to 200 yards from spring. Last fire, 1890."

--- From the Boundary files of 1902

1890 to 1915 - San Diego

The following is a memorandum written by Forest Ranger Jno. D. Maxfield, Escondido, California, May 3, 1915, to the Forester:

"Mr. John Campbell of San Diego, California, states that he made a homestead entry on land near the south-eastern boundary of Jamul Grant (approximately Section 5, T. 18 S., R. 2 E., S.B.M.) in the year 1888.

"Two years after his settlement a fire started about one mile north of his ranch and burned over Bratton, Corta Madera and Pine Valleys and the greater portion of the Laguna country, continuing on east to the desert, burning an area of approximately 5 townships. The greater portion of the area burned supported only brush.

"Mr. Campbell further states that no erosion was noticeable in Corta Madera or Pine Valleys prior to this fire. He also states that La Posta and Buckman Creeks, now intermittent streams, ran all the year long prior to above fire.

"Mr. Lew B. Harris, a Civil Engineer of San Diego, and considered one of the best, is intimately acquainted with the above mentioned territory, having done much surveying in the vicinity, as well as making the preliminary surveys and final surveys for the Morena reservoir, one of the principal impounding reservoirs of the San Diego City water system. The preliminary survey referred to was made in the year 1888.

"Mr. Harris also believes that the erosion in Pine Valley and in Corta Madera Valley is the result of the severe fire mentioned above. He also agreed with Mr. Campbell regarding the diminished flow of La Posta and Buckman Creeks.

"Mr. Harris stated further that he was acquainted with a cattle man by the name of Benton who was grazing cattle in Sky Valley in 1900, and from his conversations he firmly believes that the present erosion in Sky Valley is largely due to overgrazing in that section, since the grass was always closely grazed, and he called Mr. Benton's attention to this condition.

"In the year 1902, Mr. Harris built a retaining wall as a preliminary to the construction of the Morena dam. This wall was 115 feet high and closed up a pit formed of huge boulders, thus making an exaggerated well 115 feet deep and from 150 to 350 feet in diameter. Two years later when work was resumed on the reservoir, or dam, this well was completely filled up with sand and a great quantity had run over the top of the wall.

"Mr. Everett Peet of San Pasqual Valley irrigated, for a number of years, 30 acres of alfalfa from a stream fed from the adjacent hills which supported only brush. About the year 1906 these hills were burned off, the burned area covering not over a township. The following winter the stream was in flood during and immediately after each rain, the flood taking away several acres of his alfalfa land. The following summer, the stream, which had formerly been permanent, ceased flowing and it was necessary for him to install a pumping plant to keep the remaining portion of his alfalfa alive. Mr. Peet says this stream never furnishes the water it did before the fire.

"Serious erosion is noticeable in Mendenhall Valley on Palomar Mountain. Mr. S. J. Mendenhall, the owner, admits that erosion started after a dry year during which it was necessary to graze it very closely. This is a serious matter now since his best land is constantly being carried away. He has spent considerable money for submerged dams, rip-rap work, planting willows, etc., but without effect.

"A settler in Pamo Valley made his living for 13 years by raising vegetables, water for irrigation being furnished by a small permanent stream fed from low brush-covered hills. In 1907 a fire destroyed the brush cover on these hills, the only cover they supported, the stream stopped running early in May and it was necessary for the settler to dig a well in order to get sufficient water for domestic use. Even to this date the stream ceases to flow early in the summer.

"This same fire made a marked decrease in the flow of Santa Maria Creek flowing through Ramona which fact was noted by several who used it for irrigating near Ramona, more particularly J.W. Haworth and H. Woodward. This stream now stops running early in June."

#### 1891 - Marin County

June 28. Fire started in Bill Williams Gulch at the base of Mt. Tamalpais and swept the sides of the mountain, the dense woods back of Ross Station, those near La Gunitas, the Kent property, covering 12,000 acres of ground. It destroyed immense quantities of timber, miles of fences and many acres of pasture. The entire top of the mountain for 2/3 of the distance down the sides and the crests of the adjacent hills have been swept by the flames.

-- S.F. Chronicle, June 29

June 29. The woods on the eastern slope of Mt. Tamalpais were on fire today.... A crew of volunteers were immediately sent to the scene. The fire spread rapidly ... and now covers an area of about 1,000 acres. The tall pines and redwoods were shorn of their branches a few seconds after the flames reach them ... About 100 men are now engaged in fighting the fire ....

-- S.F. Examiner, June 30, 1891

#### 1891 - Calaveras County

June 29. Extensive field fires are reported in the vicinity of Copperopolis resulting in the destruction of considerable property and the loss of one life. The fire commenced Sunday afternoon near Copperopolis and ran over the hills a distance of seven miles to Byrne's ferry. 200 miners and everyone who could fight fire were out to save the town.

-- S.F. Examiner, June 30, 1891

1891 - Calaveras County

June 29. Extensive field fires are reported in the vicinity of Copperopolis, resulting in the destruction of considerable property and the loss of one life, that of an old Frenchman living near the town. The fire began Sunday near Copperopolis and ran over the hills a distance of seven miles to Byrnes Ferry.

-- S.F. Chronicle, June 30

June 30. A fierce fire burned in Big Tree Gulch in Calaveras County.

-- S.F. Chronicle, July 1

1891 - Sonoma County

June 30. Ranch fires in the neighborhood of Sonoma have been doing considerable damage to pastures and fences.

-- S.F. Bulletin, July 1

1891 - Marin County

July 1. (Half a column about a fire on Mt. Tamalpais)  
The fires on Mt. Tamalpais still raging. San Quentin reports the whole mountain to be ablaze. A force of 100 men was sent up from this city (San Francisco) yesterday to assist those already there. \$5.00 a day is being paid. Fully 6000 acres have been burned.  
Started by picnickers. -- S.F. Bulletin

July 1. Tamalpais from crest to foot blazed yesterday ...  
Fire originated about 2 o'clock Monday (June 29) at Camp Tucker, an old camping ground near the top of Tamalpais ... Hundreds of men fighting the fire ... -- S.F. Examiner, July 1

July 2. Tamalpais still ablaze ... Large force of workers fighting the fire night and day ... Ross Valley in great danger.

-- S.F. Examiner, July 2

July 3. Old Tamalpais is still enveloped in flames and low down on the foot hills the .... flames are striving .... to eat their way in every direction. -- S.F. Examiner, July 3

July 3. The fire has been extinguished on Tamalpais but is still burning in the Mill Valley gulches. No great alarm is felt but it is impossible to say when fire will be extinguished. No doubt many more thousands of acres will be burned over before fire will be completely controlled. -- S.F. Bulletin, July 3

July 5. The Tamalpais fire has changed into a will of the wisp on a large scale ... the point where the most danger is changes around with considerable rapidity. The advance ... flames have made the circuit of Mill Valley, Ross Valley and the region around Lake Lagunitas two or three times and today the biggest

part of the blaze is tearing along toward Bolinas devouring all the chaparral and small redwood groves in its path ...

-- S.F. Examiner, July 5

#### 1891 - Marin County

The fire that has raged so fiercely for several days past on Mt. Tamalpais has received a fresh start and unless speedily checked very heavy losses will result ... more than 300 men at work ...

-- S.F. Examiner, July 6

#### 1891 - Calaveras County

July 2. During the past ten days over 10,000 acres of grain, feed and timber land have been burned within 10 miles of Milton. So far it has been impossible to check the flames.

-- S.F. Bulletin, July 3

#### 1891 - Yuba County

July 18. The greatest fire known in the foot hills of Yuba County has been raging since last Thursday and at last account this afternoon (Saturday) it was not under control. It started from near Miner's Camp on the Yuba River near Oregon House 18 miles from here (Yuba City) and has burned over 4,000 acres all of which was timber and good pasture land.

-- S.F. Examiner, July 19

July 20. Much timber and pasture land is being burned over in the Yuba County foothills.

-- S.F. Bulletin, July 21

#### 1891 - Shasta County

July 21. A fierce fire burned for three days south of Anderson, forcing the citizens to start a back fire. Fences and buildings at Dwinelle were destroyed. -- S.F. Chronicle, July 24

#### 1891 - Santa Clara County

Forest fires among the mountains in the vicinity of Mt. Hamilton have been raging for the past 4 or 5 days. There is much anxiety felt at the observatory and they telephoned the police here (San Jose) today asking for assistance in case of danger ... The observatory people are still fighting the flames.

-- S.F. Examiner, July 22

#### 1891 - Tehama County

July 23. A fierce forest fire has been burning south of Anderson for 2 days. This afternoon it came near the town forcing the citizens to back fire to save it... --S.F. Examiner, July 24

1891 - Mendocino County

July 23. The town of Boonville in Anderson Valley 22 miles from Ukiah has been entirely destroyed by a forest fire.  
-- S.F. Bulletin

1891 - Santa Clara County

July 23. Forest fires among the mountains in the vicinity of Mount Hamilton have been raging for the past 4 or 5 days. There was much anxiety felt at the observatory and they telephoned the San Jose police. -- S.F. Bulletin  
(The S.F. Chronicle reports a ranch of 40,000 acres completely swept over.)

1891 - Sonoma County

July 24. There is a forest fire in Bennett Valley five miles from Santa Rosa. --S.F. Bulletin

1891 - Shasta County

July 24. Fierce forest fires are reported near Anderson, Shasta County, Citizens had to start a back fire to save the town.  
-- S.F. Bulletin, July 25

1891 - Santa Clara County

July 24. Over 6 square miles have been burned over on Mount Hamilton and assistance was sent out from San Jose last night to put out the fire. -- S.F. Bulletin

July 25. Fire on Mount Hamilton does not threaten observatory now. -- S.F. Bulletin

1891 - Solano and Napa Counties

July 27. A report from Vacaville says there is a destructive fire in the Blue Mountains extending over into Napa County. Many thriving orchards in Gates Canyon are believed to have been burned.  
-- S.F. Bulletin, July 27

July 27. Fire this morning in the Blue Mountains burned over a large territory. Gates Canyon containing much valuable timber and pasture lands was entirely swept over, the fire extending over the mountains into Napa County ... A large number of thriving orchards ... burned over. -- S.F. Examiner, July 27

1891 - Calaveras and Tuolumne Counties

July 28. Yesterday afternoon at 2 o'clock a fierce forest fire which had been devastating Calaveras County for several days

crossed the Stanislaus River near the old Abbey ferry ... in a short time the flames had traveled up to the marble quarry ... The marble mill on the quarry was ... leveled to its foundation ... and all machinery ... was destroyed ... A large force of men ... worked all night fighting the flames ... This force was increased today by 100 men from Sonora all of whom worked heroically thereby saving the town of Columbia ... A very large extent of territory has been swept bare ... At present the fire is rushing up the Stanislaus River and there is no hope of saving American Camp.

-- S.F. Examiner, July 31

#### 1891 - Calaveras and Tuolumne Counties

July 25. A forest fire which has been burning along the Stanislaus River in Calaveras County crossed the river yesterday in the vicinity of the marble works near Columbia and surrounded and destroyed the works. Miss Kate McNamee, a daughter of the owner, was caught by the flames and burned to death. The fire swept over McPhearson's ranch, P. M. Trask's ranch, J. C. Kufe's ranch, Gold Springs and several other places. Then the Columbia Brewery was destroyed. From there the fiery serpent rushed onward to near and partly around Columbia. Some ten hack loads of men from Sonora went to help save Columbia. The whole country is enveloped in flames.

-- S.F. Bulletin

#### 1891 - Tuolumne County

July 29. A large force of men worked all night and saved the town of Columbia, several quartz mills and many thousand dollars of property have been destroyed. A large extent of country has been swept clear of timber and pasturage. The fire is rushing up the Stanislaus River and there is apparently no hope of saving American Camp.

-- S.F. Bulletin

#### 1891 - San Joaquin County

Aug. 5. For three days a terrific forest fire burned around French Corral doing much damage. A residence and large quantities of firewood was destroyed. -- S.F. Chronicle, Aug. 8

#### 1891 - Nevada County

August 7. For 3 days past a terrific forest has been burning around French Corral and although the whole male population has turned out much damage has been done ...

-- S.F. Examiner, August 8

#### 1891 - Sonoma County

This afternoon a fire broke out west of town (Sonoma) ... the flames leaped up the mountains which are now fearfully burning ... The fire is burning towards Napa County. -- S.F. Examiner, Aug. 11

1891 - Sonoma County

August 14. The mountain fire which has been raging near here for the past three days came near destroying the residence of Mrs. Robert C. Johnson last night. 50 men left town to fight the fire ... It is still burning fiercely through the Lovell Valley and where it will stop no one can tell.

-- S.F. Examiner, August 15

1891 - Santa Clara County

August 14. The grass fire on the Hot Springs road which has started and been extinguished twice within a week commenced burning again today ... A force of men this afternoon got the blaze checked and all danger is now passed.

-- S.F. Examiner, August 15

August 14. The grass fire on the Hot Springs road which has started and subsided twice within a week commenced burning again and made its way to Cullum Ranch directly opposite Hot Springs Hotel, Coyote Creek. A large field of feed was destroyed.

-- S.F. Chronicle, August 15

1891 - Butte County

August 18. Forest fires have been raging for several days near Hurtling and Enterprise. At Forbestown some danger is feared. About one hundred miles have been burned over.

-- S.F. Bulletin

1891 - Nevada County

August 18. The Nevada City Herald of Saturday afternoon reports that a fire started on the Middle Yuba and came up the hill across Grizzly Ridge across the canyon and has now worked its way to Little Grass Valley where it is raging furiously. The people of the ridge are working hard to save the cordwood left out in the woods to season. The Milton Co's big flume below town is in danger and will probably be destroyed.

-- S.F. Bulletin

August 19. The forest fires that started two weeks ago on the San Juan Ridge in Bridgeport township, Nevada County, still burn with unabated fury. French Corral, Birckville, Cherokee, Columbia Hill, Badger Hill and other towns have had narrow escapes. Portions of the flumes belonging to the Milton & Badger Hill Milling Companies have been destroyed, also some isolated buildings and fences. -- S.F. Bulletin

1891 - Fresno County

August 25. Large forest fires have been burning for three days on Pine Ridge, fifty miles east of Fresno in the finest pine district in Fresno County. The region is uninhabited except by lumbermen. The saw mills are not considered in danger unless the wind arises. -- S.F. Bulletin

1891 - Santa Clara County

August 25. A fire has been raging on Mount Hamilton Ridge since Saturday. It started near Smith Creek, burned all around Mt. Isabella and is now going towards San Felipe Valley. Campers started the fire. -- S.F. Bulletin

August 25. Another big fire has been raging on Mt. Hamilton ridge since Sunday. It started near Smith Creek and burned all around Mt. Isabella and is now going towards San Felipe Valley ... A force of men have gone there to fight the flames ... The fire was started by campers.

-- S.F. Examiner, August 23

1891 - Fresno County

August. Settlers set fire to brush near Dunlap, Fresno County and burned an area of about 12,000 acres. In 1912 this area was covered by brush from 6 to 12 feet high. Old burned logs show that timber existed in the present brush belt where no timber existed at that time. -- Ralph Hopping

Sept. 8. A fire broke out Monday near the Millerton road at Course Gold, Fresno County and burned over 5000 acres of land before extinguished. -- S.F. Bulletin

1891 - Shasta County

Sept. 12. An immense fire has been raging on the south slope of Mt. Shasta a few miles south of Sisson. A vast amount of wood, ties, logs and standing timber being destroyed. Every available man was needed to check the fire. -- S.F. Bulletin

1891 - Los Angeles County

Sept. 28. The brush in the mountains back of Santa Monica have been burning for three days. Many homes have been destroyed and it is feared there has been loss of life.

-- S.F. Bulletin

1891 - Eldorado County

Sept. 30. A terrible forest fire raged for several days

in Georgetown district. It caught near Greenwood and swept over the entire country between Georgetown and Salmon Falls destroying farm houses, barns, fences, etc. 50 families lost everything and barely escaped with their lives. The mining town of Pilot Hill was wiped out. The fire passed over 25 miles by 20 miles wide.

-- Bismarck Daily Tribune, Oct. 1, 1891

#### 1891 - Eldorado County

October 1. The losses by fires on the Georgetown divide, Eldorado County, will approximate \$20,000. -- S.F. Bulletin

#### 1891 - Eldorado County

October 5. Terrible forest fires raged here for over a week spreading over Greenwood country to the west of Garden Valley destroying many dwellings, barns, hay and thousands of acres of dry feed. More than 40 square miles were burned over and at Pilot Hill several residences and the postoffice were burned. Only a few buildings at Burner Hill were left. The loss of stock was large and farmers lost everything.

-- Bismarck Daily Tribune, Oct. 6

#### 1891 - Santa Clara and Santa Cruz Counties

October 9. Fierce mountain fires have been burning along the ridges of the Coast Range Mountains northwest of Gilroy the past two days. The amount of damage to property cannot be determined but it will in all probability be considerable.

-- S.F. Bulletin

#### 1891 - Siskiyou County

A severe fire burned in the head of Russian Creek in Siskiyou County and destroyed all the timber on the steep slopes where it burned. It was caused by some one burning a log out of the trail. It spread over an area of 3 or 4 miles square.

-- H. Finley

#### 1891 - Tuolumne County

A fire occurred at Cow Creek on the Stanislaus in the vicinity of Cow Creek Station. It was severe enough to burn everything except the old trees. Size not known.

#### 1892 - Sonoma County

July 22. A fire broke out ... three miles south of Petaluma today. The wind ... drove the fire rapidly in an

easterly direction ... Couriers came rushing into town on horse back bringing details of the rapid spread of the fire. They said unless it was soon stopped it would shortly reach the southern boundaries of this city (Petaluma). As many townspeople as could get conveyances went out to assist the ranchers and in about three hours the fire was under control. The fire was started by someone who was burning brush ...

-- S.F. Examiner, July 28

July 22. A fire broke out on the Skeppington ranch about three miles south of Petaluma today. The wind was blowing hard from the west and drove the fire rapidly in an easterly direction. Dense volumes of smoke attracted the attention of the towns people. The fire started at the Skeppington ranch by some men who were burning brush. A barn full of loose hay, out-buildings and about 15,000 bales of hay, fencing and a large area of grass were burned. In all from 4000 to 5000 acres was burned over and the damage will be about \$10,000.

-- S.F. Chronicle, July 23

#### 1892 - Fresno County

July 27. A grass fire is reported burning in the foothills 30 miles east from Fresno. Much damage has been done. One or two houses have been burned and several barns. Many stacks of hay together with fences and cordwood have been destroyed. It burned 2 or 3 days and extended to the hills near the edge of the plains. -- S.F. Chronicle, July 28

#### 1892 - Butte County

August 3. Wood choppers burning brush caused a fire near Chico which burned 4000 sacks of barley.

-- S.F. Chronicle, August 5

#### 1892 - Yuba and Placer Counties

August 5. A heavy forest fire is raging on Rattlesnake Creek between the City of Marysville, Yuba County, and Colfax, Placer County. Fences have been burned and parties are out fighting the fires to save their houses.

-- S.F. Chronicle, August 6

#### 1892 - Sacramento County

August 6. The forest fire on the American River near Fokom City, Sacramento County, has burned itself out. It spread over about 5000 acres and caused a loss of \$10,000. A few acres of wheat was destroyed but no houses were consumed. The main damage was in the destruction of timber.

-- Morning Oregonian, August 7

1892 - Fresno County

August 6. Destructive fires have been burning for several days in the foothills NE of here in the Tunference Flat and Big Sandy country. Great damage has resulted to grass, fences, hay and at least 6 houses have been burned. The fire will make feed very scarce in this section of the country.

-- S.F. Chronicle, August 7

1892 - Amador County

August 7. A fierce fire raged in the hills on the Amador side of the Mokolumne River during the latter part of last week and the fore part of this week.

-- S.F. Bulletin, August 8

1892 - Los Angeles County

August 10. Enormous quantities of valuable timber have been destroyed by fire within the past few days between Port Los Angeles, Los Angeles County and Port Crescent. Picnickers are blamed for the damage. -- S.F. Chronicle, Aug. 11

1892 - Santa Clara County

August 16. A large mountain fire is now raging south and east over the unoccupied lands of Miller and Sargent who are fighting it with a force of men. The fire started in a barn on Monday on the higher ranch. All ranch buildings and 60 tons of hay were consumed. -- S.F. Chronicle, Aug. 17

1892 - Marin County

Fire started on the Bolinas road in Marin County by 2 men cooking breakfast spread over the ridge to the ranches and pasture fields near St. Vincents Orphan Asylum. Several hundred acres of land were burned over and many fences were destroyed.

-- S.F. Chronicle, Aug. 20

1892 - Lake County

August 21. The Randolph House in High Valley has been burned by forest fires. The occupants saved part of the furniture.

-- S.F. Chronicle, Aug. 22

1892 - Santa Clara County

Aug. 23. The mountain fires about Gilroy have subsided.

-- S.F. Bulletin

1892 - Marin County

August 24. The fire on the Bolinas Ridge and Tamalpais Mountain is checked on the Sausalito side. The wind it is feared will start up the fire again. -- S.F. Bulletin

1892 - Siskiyou County

August. A fire caused by stockmen burning brush burned over about 1000 acres and destroyed about 1,000,000 feet of timber near Seiad in Siskiyou County. -- Horace Phillip

1892 - Alameda County

October 11. About 10 o'clock fire started in the brush in the Berkeley Hills. The blaze could be seen for miles in Oakland. A number of fences were destroyed but no great damage was done. -- S.F. Chronicle, Oct. 12

1892 - Los Angeles County

October 19. Two large forest fires are raging near here. One is in the mountains northeast of Duarte and the other in the mountains beyond LaCanada. -- S.F. Chronicle, October 20

1891 & '92 - California

The following is taken from the fourth biennial report of the California State Board of Forestry, pages 14, 16 and 24:

The sheep were excluded from the mountains around the Yosemite, and there were no forest fires. One little fire that was started accidentally near Hazel Green was put out by a party of Berkeley students who were passing, and the troopers stopped another little blaze that might have done some damage. Usually there are forest fires in all directions in September and October, and the air is so filled with smoke that nothing can be seen from the mountain tops. Last fall the air was perfectly clear. The Washburn Brothers, who have kept the hotel at Wawona for years, testify that heretofore a pall of smoke has hung over their place in the fall, obscuring the sky, hiding the mountains, and at night settling down into the valley and making it difficult to breathe. Two years ago they had to fight fire for two weeks, and it was with difficulty that all the men who could be collected saved the Mariposa grove of Sequoias from a scorching that would have destroyed half the trees. Three years ago last October, when Thomas Agnew came down out of the mountains, he counted ninety-two forest fires on the watershed of the San Joaquin between his place and Jackass Meadows. The sheep had gone out just ahead of him. Last year there were no sheep in that part of

the country and there was not a single fire. Last August some sheepherders started fires near Lake Vernon, to burn out the undergrowth. The smoke was seen by a cattle man 20 miles away, and he collected a squad of his neighbors, rode to Lake Vernon, and compelled the herders to assist in putting out the fires. Wherever land is occupied and fenced, forest fires are feared and fought, and the vandal sheepherder is taught to be careful with his matches; but the unoccupied public domain is devastated and blistered with impunity, because nobody's fences are endangered, and nobody realizes that the destruction of the forest is a greater damage than the burning of all the fences on earth.

#### 1893 - Santa Cruz County

July 29. A forest fire which started Sunday (in the vicinity of Bushmon) raged for a week covering four miles of territory. Many cords of wood, small houses, fences and several bridges have been destroyed. -- S.F. Chronicle, July 30.

#### 1893 - Marin County

August 3. The fire that has been raging on Mt. Tamalpais for three days past was extinguished today after burning over 3,000 acres of timber land and brush. -- S.F. Examiner, Aug. 4

August 3. The forest fire which has been raging in and around the base of Mt. Tamalpais for several days was extinguished at a late hour today by men who were employed to fight it. Several thousand acres of good timberland succumbed to the flames and the damages are considerable. The fire was thought to be set by campers. -- S.F. Chronicle, Aug. 4

#### 1893 - Santa Clara County

August 7. A forest fire raged in the mountains back of Congress Springs for two days and nights. A farmer was burning brush and the strong winds spread the fire beyond control. About 3 square miles of timber were destroyed before the men succeeded in controlling the flames.

-- S.F. Chronicle, Aug. 9

#### 1893 - Placer County

August 9. Forest fires are again prevalent in this section (Colfax). There is an extensive fire at Applegate and the damage is great. There is a big fire near Dutch Flat which is spreading rapidly. A vast area of the country has been devastated in the proximity of the railroad. There are other fires in the eastern part of the county.

-- S.F. Chronicle, Aug. 10

1893 - Nevada County

August 10. Forest fires are again prevalent. The extensive fire at Applegate caused great damage and the big fire near Dutch Flat is spreading rapidly. A vast amount of country has been devastated in close proximity to the railroad. Other fires are raging in the southern part of the county.

-- S.F. Examiner, August 10

1893 - Marin County

A forest fire has been raging about a mile from the summit of Mt. Tamalpais on the Mill Valley side since 2 o'clock today and threatens to consume all the timber on the east side of the mountain. Men have been sent to the scene ... The fire is thought to have originated from the carelessness of parties who have been camping in the canyon nearby.

-- S.F. Examiner, August 11

1893 - Mendocino County

Forest fires have been denuding the redwood groves in Mendocino County for several days. Although the sight is grand considerable damage has been done the forest.

-- S.F. Chronicle, August 16

1893 - Tuolumne County

August 17. An immense forest fire broke out north of Jamestown Thursday morning and Friday was burning directly towards Sonora which it surrounds on the northeast and south sides. By Friday 100 cords of wood and ranch fencing and standing timber has been burned. The fire was started by the carelessness of Yosemite tourists. The fair grounds were barely saved. -- S.F. Chronicle, August 19

August 19. The immense forest fires which have been raging in the vicinity of Sonora for the past four days are under control. Numbers of men turned out and by backfiring succeeded in confining them to the hills. One barn belonging to Mr. Hilk was destroyed and a number of cabins.

-- S.F. Examiner, August 20

1893 - Lassen County

August 28. A man who set fire to the woods nearly caused the destruction of the town of Susanville in Lassen County was arrested, tried and sentenced to 60 days in jail.

-- S.F. Chronicle, August 29

1893 - Tuolumne County

August 31. Today at 12:30 o'clock one of the largest fires that has visited this section of California was started about 2 miles north of Sonora, Tuolumne County. A large number of vehicles were in a few moments loaded with men intent on staying its progress. No houses of importance were burned, but much wood and fencing were consumed. -- S.F. Chronicle, Sept. 1

1893 - Sonoma County

September 28. Dense volumes of smoke were seen to arise in the hills near the headwaters of Aqua Caliente Canyon about 4 miles north of Sonoma. The wind was blowing from the west with great velocity carrying the flames before it directly east towards the shores of San Pablo Bay. The flames spread over an area of territory 10 to 15 miles wide. In the path of the flames were a number of ranches but at this time it is impossible to state what damage has been done.

-- S.F. Chronicle, September 29

1893 - Nevada County

A fierce fire is raging in the woods near Spencerville 18 miles from Grass Valley. Miles of fencing have been destroyed but so far farm houses have been saved. The forest is on fire for miles. -- Bismarck Daily Tribune, Oct. 4.

1893 - Orange County

Nov. 12 - Fire has devastated about 8000 acres of pasture and timberland on the Santa Marguerita ranch, Orange Co. Much valuable pasture and timber and a large bee ranch were destroyed. The origin of the fire is still a mystery but cowboys and cigarettes probably will account for it.

-- Morning Oregonian, Nov. 13

1894 - Santa Clara County

August 1. The forest fire which has been raging for the past 5 days on Mt. Hamilton is still burning... The little band of fire fighters ... who have been beating back the flames all night were about tired out ...

-- S.F. Examiner, August 2

1894 - Sonoma County

August 25. Report reached here (Santa Rosa) today that the town of Guerneville, Sonoma County, has been destroyed by forest fire. Today was the warmest of the year and every-

thing burned like tinder. Guerneville is a lumber town in the heart of the forest and has a population of 500. All the buildings burned except a livery stable.

-- Morning Oregonian, August 26

September 9. During the last 24 hours a strong hot wind has been blowing from the northeast making this the warmest period of the season (in Santa Rosa). Great clouds of smoke are rolling up in the northwest and northeast showing that the woods are burning in those localities. The exceedingly warm weather of the last few weeks has dried vegetation in the forest and fields to a highly inflammable condition. The fire once started would do great harm.

-- Morning Oregonian, September 10

#### 1894 - Marin County

September 10. Forest fires started in the western suburbs of Mill Valley today and for a while threatening the whole town. It is now under control on the Mill Valley side. The whole population of the town and surrounding country turned out in full force to fight the flames and it was through their combined and heroic efforts that the flames were beaten back. Fire is still raging at the base of Mt. Tamalpais and there are a score of men fighting it. The fire was supposed to have originated from a camp fire near here. It has burned over a large stretch of country.

-- Morning Oregonian, September 11

#### 1894 - Santa Barbara County

September 10. Santa Barbara was visited again this afternoon by severe mountain fires. One has crossed the Santa Ynez range near the Refugio Pass in the vicinity of the big fire last week. Another crossed near the San Roui Canyon just north of the city and is burning down the mountain toward the valley. -- S.F. Chronicle, September 11

#### 1894 - Napa County

A forest fire was started in the redwood forest back of Mill Valley at 2o'clock ... After several hours of fighting the fire was got under control ... The fire originated from a camp fire left smoldering by hunters.

-- S.F. Examiner, September 10

#### 1894 - Sonoma County

September 10. The little town of Occidental ... had a narrow escape from destruction by a forest fire Saturday

and Sunday ... six miles of fence and over a thousand acres of valuable timber land was destroyed. -- S.F. Examiner, Sept. 11

#### 1894 - Monterey

An unpublished report of the U.S. Geological Survey, dated 1905, covers Forest conditions in the Monterey Forest Reserve. On the subject of "Burns and Grazing" it says:

"The most extensive fires which have periodically ravaged the various watersheds have been confined largely to the chaparral. For years past fires have been started and allowed to run until the value of the cover has been seriously impaired. One fire, in the year 1894, raged for several weeks, covering a region embracing the upper watersheds of every perpetual stream in the area now reserved, and the traces of this burn are yet plainly to be seen. Stock has been ranged all over the public domain and the heavy chaparral has been an obstacle to their free movement from place to place and fires are set out to render their passage more easy."

#### 1895 - Fresno County

June 30. Fire broke out yesterday in the foothills near the San Joaquin River twenty miles from Fresno and is still burning, having swept thousands of acres of wild pasture land. All efforts to head it off have so far proved ineffectual.

-- S.F. Chronicle, July 2

#### 1895 - Mendocino County

July 24. Fire started on the summit of the lofty range of hills east of Ukiah about 2 o'clock this afternoon. Toward nightfall it stretched away north and south many miles. It began in a grassy open on the ridge and soon reached the timber line lower down. As soon as the fire reached the undergrowth and pine forest the flames shot upward hundreds of feet illuminating the heavens. The breeze increased and the flames curled upward assuming fantastic shapes and leaping from tree to tree with amazing rapidity. -- S.F. Chronicle, July 25

#### 1895 - Nevada County

July 25. A forest fire is raging on Washoe Mountain ten miles from Truckee, Nevada County. It started this afternoon and the wind has spread the flames over three miles of timber. A hundred men are out battling the fire tonight. Quantities of wood and timber are menaced. The sight from here is grand.

-- S.F. Chronicle, July 26

1895 - Santa Clara County

August 3. A big forest fire has been raging about 15 miles east of San Jose, Santa Clara County, near the Guadalupe road ever since noon yesterday. Something like 75 acres of ground has been burned over. -- S.F. Chronicle, Aug. 4

1895 - Amador County

August 20. A brush fire started Tuesday 3 miles east of this place (Jackson) and has destroyed nearly a hundred acres of timber on a tract recently purchased by the U.S. for an Indian reservation, also 100 acres of land adjoining. The loss is estimated at \$3000 to \$4000. -- S.F. Chronicle, Aug. 24

1895 - Mendocino County

August 23. The heat in this city (Ukiah) today was intense owing to the extensive forest fires raging on the pine ridge directly west of town and distant about  $1\frac{1}{2}$  miles. The flames can be seen from this city mounting high above the loftiest pines. That portion of the country is quite thickly settled by mountaineers and timber owners and camps of shingle and picket makers are numerous. -- S.F. Chronicle, Aug. 24

1895 - Nevada County

August 25. The ice house of the Rockey Run Ice Co. near Floreston was destroyed by fire this afternoon. The accident was caused by a forest fire which is raging in that vicinity and which threatens to destroy Loukup sawmill back in the mountains from Floreston. -- S.F. Chronicle, August 26

1895 - Santa Cruz County

Sept. 21. This morning heavy clouds of smoke were seen northwest of this city (Santa Cruz) and as the day advanced the clouds increased until they formed a line many miles in length. They were caused by a fierce forest fire which has done much damage already and is not yet under control although hundreds of men are fighting it. The fire was caused by men blasting stumps. Wind carried it beyond control to Crowell's land across which it swept forcing two families near Rincon to hastily leave their cabins. Tall trees were licked up as though they were saplings. Hundreds of cords of wood contributed to the flames. Soon there was a cry for more men. The Helm Co. ordered all their men employed at the mill to assist in fighting the flames. Cowell sent word to the powder works asking that employees be sent out to assist. Already Cowell has lost 4000 cords of wood while the loss of standing timber is great. Fire now stretches from Gold Gulch to Rincon.

-- S.F. Chronicle, Sept. 22

1895 - Santa Cruz County

September 22. All night long hundreds of men fought the advance of the forest fire (near Santa Cruz) but when morning broke the fire was still burning. The fire spread to the east side of the river, within 2 miles of the powder works. Seeing that it was useless to attempt to stay the flames which were consuming thousands of cords of wood, licking up tall trees with the rapidity of a whirlwind, the men devoted their efforts to backfiring so as to prevent the spread of the flames to the coast. But their efforts were in vain. From one position to another the men were forced, the flames growing hotter and hotter. Immense trees fell with the noise of thunder. The road between Rincon and Felton is impassable, the way being strewn with burning logs, blazing trees and an archway of flame. This afternoon no trains were able to run to Felton as the fire was dangerously near the track sections of which have been warped by the heat. It is estimated that about 10,000 cords of wood have already fed the flames. As far as the eye can search the forest is a mass of flames. The fire covers over ten square miles and is still spreading. The damage cannot be estimated.

-- S.F. Chronicle, September 23

September 23. Despite the lack of wind the forest fires this afternoon spread until near the city (Santa Cruz) reservoir. If the fire went much further buildings would be endangered. After a terrible struggle on the part of a large force of men the flames were checked. A light breeze sprang up this afternoon and fanned the fire into increased ferocity. Already the burned territory covers 8,000 acres. Cowell's loss is roughly estimated at \$30,000 and the fire still holds sway on his lands. The fire on Cowell's land could easily have been prevented for there is a creek not ten feet from where the blaze started in Gold Gulch but the men who were blasting stumps and caused the fire became frightened and ran away.

-- S.F. Chronicle, September 24

September 23. Word comes from town (Santa Cruz) that a big fire has broken out in Shingle Gulch near Felton. The railroad company has a crew of men out trying to check the flames.

-- S.F. Chronicle, September 24

September 26. The fire near Zayante shifted around today and swept into the forest in the direction of Boulder Creek. Passengers on the narrow gauge train could plainly see the burning forests. The fire near Scott Valley has gone down considerably.

-- S.F. Chronicle, September 27

September 26. A fire is reported in the woods near Ben Lomond.

-- S.F. Chronicle, September 27

1895 - Santa Cruz County

September 27. Intelligence today from the fire swept Zayante region of the Santa Cruz Mountains tells of the uninterrupted progress of the flames which have burned over an area of 5 square miles. There are at least 10,000 acres yet to burn provided no welcome rains come to subdue the flames. The fire in the Zayante has now been under way for the past 3 days.

-- S.F. Chronicle, September 28

September 28. The forest fires (Santa Cruz Mts.) are dying down only smoldering ruins now being seen where a few days ago there was a fierce conflagration. The loss cannot be definitely estimated but is supposed to be about \$75,000.

-- S.F. Chronicle, September 29

September 30. The forest fire for the past week has been raging in the Zayante region above Los Gatos, Santa Clara County, in the Santa Cruz Mountains, has about burned itself out. Several other small blazes have been reported in the mountains.

-- S.F. Chronicle, October 1

1895 - Solano County

October 4. The most destructive forest fire that has occurred in this vicinity in many years started on the Blue Mountain range about 14 miles north of Suisun. The flames spread with great rapidity. Every person for miles around who could do so hurried to the scene and fought the advance of the flames. The fire traveled a distance of 12 miles. It is estimated about 40 or 50 miles of fencing have been burned besides the destruction of pasture and large quantities of wood. The losses will amount to \$50,000. The fire is supposed to have been the result of the carelessness of a Portuguese settler who is clearing a claim on the range and regardless of consequences burned brush when the north wind was blowing.

-- S.F. Chronicle, October 5

1895 - Sonoma County

Destructive forest fires have been raging in the mountains north and west of Healdsburg for the past 24 hours, doing considerable damage to fences and feed.

-- S.F. Chronicle, October 5

1895 - Placer County

November 16. A fierce forest fire has been raging close to the town of Blue Canyon, Placer County. The origin of the fire is unknown but tramps are suspected. The Blue Canyon and Summit fire tram and several section crews were dispatched to fight the flames. Heavy damage will result

unless it is subdued. The extent of damage so far is principally the destruction of timber. -- S.F. Chronicle, November 17

1895 - Santa Barbara County

December 25. Santa Barbara was threatened with a conflagration by the brush fires raging in the canyons not far from the city. The canyons or gulches have not been burned for several years and are dry as tinder and all conditions are right for the general and almost continuous fires which have been going on for several weeks in the canyons which lead to the plain to Santa Barbara. A large part of the Sherman & Eslan ranch was burned over. Both sides of the beautiful Sycamore Canyon drive are blackened and many magnificent trees destroyed.

-- S.F. Chronicle, Dec. 26

1896 - Monterey County

August 12. Reports from Carmel state that after a hard struggle the forest fires started there by campers have been subdued. Considerable damage was done to pasture and timber.

-- S.F. Chronicle, Aug. 14

1896 - Nevada County

September 9. A fierce forest fire is said to be raging near Yuba Pass, a siding about 5 miles west of Cisco in the vicinity of Bierce and Smarts sawmill. The fire has been raging since early this morning. A late report says the railroad men have succeeded in keeping the flames from the snow sheds, but the sawmill is in danger. -- S.F. Chronicle, September 10

September 10. The fire which last night threatened the snowsheds and Bierce and Smarts sawmill near Yuba Pass was extinguished at an early hour this morning. .. Many acres of excellent timber were destroyed. -- S.F. Chronicle, Sept. 11

1896 - Los Angeles County

September 16. A forest fire which has been raging in the mountains north of La Canada for the past two weeks reached the summit and started down the south side yesterday. Several thousand acres have been burned over and a force of men are at work trying to check its progress. Parties who are near it say the heat is so intense that it can be plainly felt a mile away.

-- S.F. Chronicle, September 17

1896 - Los Angeles County

September 17. Mountain fires have been raging west of Pasadena for several days. Thousands of acres have been burned over.

-- S.F. Bulletin

1896 - Los Angeles County

October 5. Forest fires have been raging in the mountains and only strong efforts prevented the flames from crossing Dark Canyon and sweeping the whole front of the range on which the Mt. Echo Hotel and the Mt. Lowe Railroad are located. A solid sheet of flame 45 feet high rushed down the canyon and was checked by backfiring in the low brush. It burned over a strip 20 miles long and from 2 to 5 miles wide.

A huge fire is now burning in San Gabriel Canyon and dense smoke obscures the sky northeast of Pasadena.

-- Daily Rocky Mt. News, October 6

October 6. The mountain fires still burn fiercely, particularly in the San Gabriel Canyon region. Immediately back of Pasadena on the top of Browns Mountain the flames can be distinctly seen. The proprietor of Switzers Camp came in today to get more men with whom he started up the south side of Browns Mountain, intending to work up to a junction with the men who are fighting on the other side. Quite a number of the men are disabled, some from poison oak and some from injuries. The Pasadena City Council adopted a resolution today calling upon the Supervisors to appropriate funds to aid in fighting the fire. The fire in Tejunga Canyon neighborhood is apparently as big as ever and seems to be burning in large timber. -- S.F. Chronicle, October 7

October 7. Forest fires have been raging all day in the mountains and foothills north of Pomona Valley. During the night sparks from the great fires which have been destroying hundreds of acres of timber north of Pasadena and in the vicinity of Mt. Lowe were carried to the brush in San Antonio Canyon in San Bernardino County and by morning fires had been started there. This evening the fires were burning more fiercely than ever. It is feared all the standing timber on the sides of Old Baldy or Mt. San Antonio will be destroyed. The city of Pomona gets its water supply from the hills and canyons in the locality of the fires and it is feared that the destruction of the vegetation and trees has jeopardized the water bearing soil in the hills.

-- S.F. Chronicle, October 8

October 8. The County Supervisors sent out 33 men today to fight the forest fires and it is thought the flames immediately back of Pasadena will be out very soon. The Tejunga and San Gabriel Canyon fires are far from being exhausted. Ten men were brought in last night exhausted. -- S.F. Chronicle, October 9

October 10. Reports came to the Supervisors today that the fires which have raged in the Sierra Madres back of Pasadena for weeks have been extinguished. 75 men have been working there for several days. -- S.F. Chronicle, October 11

1896 - Los Angeles County

October 12. A big fire has broke out again on the front range within a mile and a half of Alpine Tavern and the Mt. Lowe R.R. and is moving towards the Mt. Lowe property. Unless it is checked before getting into the Millard Canyon it will endanger the Mt. Lowe property. It is now in Saucer Canyon, a branch of Millard Canyon.

-- S.F. Chronicle, October 13

1897 - Shasta County

June 9. A large fire broke out in the brush and timber belt 3 miles northeast of Redding today and driven by a strong wind, it did much damage, destroying timber, fences and some buildings. A good force of men has been fighting the fire.

-- S.F. Chronicle, June 10

June 12. The forest fires northeast of this city are continuing with ruinous results. The little mining town of Hart with a population of about 500, situated about 8 miles from here (Redding), had a narrow escape from the flames, several buildings on the outskirts of the town being burned before the flames were under control ... A broad swath of timber was felled before the flames and served to turn the fire from its course, but the flames are still blazing high. -- S.F. Chronicle, June 13

1897 - Butte County

June 13. A fierce forest fire is burning within four miles of Oroville tonight and it is feared that great damage will be done.

-- S.F. Chronicle, June 14

1897 - Calaveras County

June 30. A destructive field fire is raging in the hills around Burson east of Lodi. Backfiring has been indulged in to save the town of Burson. -- S.F. Chronicle, July 1

1897 - Alameda County

July 11. More than 3,000 acres in the Berkeley Hills were swept by fire yesterday and at an early hour this morning the fire was still spreading rapidly in spite of strong efforts to stop its progress. The prospect is for a wide extension of the area of destruction. But for the action of Professor E. W. Hilgard the University building might have been consumed. Only a week ago the professor ordered the dry grasses on the hills just back of the buildings burned and this successfully checked the spread of the fire in the direction of the University.

-- S.F. Chronicle, July 12

1897 - Alameda County

July 12. The big forest fire which started in the Berkeley hills Sunday morning is still burning this evening (Tuesday) though all danger is past. The flames have travelled north and east from Berkeley. They have now reached the neighborhood of Walnut Creek. The extent of the devastated district is almost treble that of any former fire. It stretches from the Alameda Water Company's ranch, northwest of Grizzly, southeast to Telegraph Canyon, north to the Fish ranch and then east towards Walnut Creek, a distance of six or seven miles and in places extending three miles in width. It is estimated that at least 7,000 acres are burned over. The damage done is even greater than at first anticipated ... The loss is confined to feed for the stock ... It is now certain the fire was caused by campers or hunters. -- S.F. Chronicle, July 13

1897 - Napa County

July 13. About 8 o'clock last night a fire alarm was turned in from the Edge Hill Vineyard Co. (near St. Helena). Nearly 200 went out to fight the fire, which at that time was confined to the burning of trees and pasture. A large amount of cordwood, a barn and several small cabins were also burned, besides the damage done to hundreds of acres of valuable wood and pasture land... This was one of the most disastrous forest fires ever known in this vicinity. The cause was probably the igniting of dry grass by wadding from some sportsman's gun. -- S.F. Chronicle, July 16

1897 - Alameda County

July 17. A ranch near Sunolgen came near being swept by flames on Saturday. The fire was started by campers who built a bonfire in Bachelor Canyon. The fire shot up the sides of the canyon and at least 50 men had to fight the flames. A great deal of fencing was burned, but the loss will be small.

-- S.F. Chronicle, July 20

1897 - Tehama County

July 17. A large field fire is raging a few miles north of this place (Red Bluff). The fire commenced about noon today and has been raging furiously ever since, covering an area of many miles and destroying much property and buildings. The fire is supposed to have started from the camp of some tramp.

-- S.F. Chronicle, July 18

July 18. A forest fire broke out north of Red Bluff Saturday forenoon and burned over a large extent of country. This evening (Sunday) it was gotten under control... About 200 men were kept busy fighting the fire today. The Dibble Creek school house and a great many fences were burned. The fire burned over a stretch of country about 15 miles in length.

-- S.F. Chronicle, July 19

1897 - Placer County

July 18. The engine of train 1 set the grass on fire in four places inside of two miles of this place (Loomis) today about noon. A heavy hot norther blowing furiously sent two beyond control for awhile when one was stopped, after doing considerable damage to fences, pastures and orchard trees... The largest one is still raging and has burned over thirty or forty square miles, destroying all feed, timber and fences. -- S.F. Chronicle, July 19

1897 - Contra Costa County

July 18. Mountain fires have broken out in the vicinity of Mt. Diablo and Pine Canyon. The Mountain House is in great danger of destruction. Thus far miles of pasture land and fences have been laid in ashes. -- S.F. Chronicle, July 19

1897 - Alameda County

July 18. One thousand acres of grazing and timber land east of Livermore have been swept by fire. The fire was started several days ago by log blasting in the canyon of the Arroyo Valle. -- S.F. Chronicle, July 19

1897 - Contra Costa County

July 18. Until a late hour last night the citizens and employees of the Oakwood Stock Farms at Danville were fighting fire. About 600 acres of pasture land were burned... There was at one time great danger that the whole place would be destroyed. -- S.F. Chronicle, July 20

July 19. John Walker, who owns land below Mt. Diablo, suffered a loss of many hundred acres of pasture and fences. The fire originated at Pine Canyon where there are many campers. -- S.F. Chronicle, July 20

1897 - Sacramento and Placer Counties

July 19. 100 acres of pasture burned between American River and Ben Ale Station. Another fire started yesterday between Roseville and Lincoln in Placer Co. and destroyed several barns, outbuildings and a residence.

A great stretch of country between Rocklin and Loomis, Placer Co., was also burned. -- S.F. Chronicle, July 20

1897 - Shasta County

July 19. Forest fires originating in some unaccountable manner at the top of Reeds Hill, several miles north of this city

(Redding) have spread to dangerous proportions, doing considerable damage and requiring the services of scores of men to keep them in check. Much damage is being done in the destruction of fences and cordwood for the mines. Several cabins have been destroyed.

Another fire in the Flat Creek section due north of this city (Redding) has destroyed much timber and is being rapidly swept towards Iron Mt., the seat of activity of the Big Mt. Coffee Co. A force of several hundred miners is fighting its advance, but with little success.

An extensive fire in the mountains north of Shasta threatens the City of Keswick.

A big fire at Stillwater is said to be threatening the yards of the Shasta Lumber Co. and an army of men is out there trying to conquer the blaze.

At Buckeye and Churn, northeast of Redding, the valleys are being denuded of their growth. The homes of Wm. Alexander and George Bowers were consumed and the Dix ranch was saved, only by utmost exertion. Systematic backfiring between Buckeye and Newton will save the country northeast of there. -- S.F. Chronicle, July 20

#### 1897 - Tehama County

July 19. The forest and brush fire, which has been raging north and west of here (Red Bluff) for two days is now under control. The fire commenced at Blue Tent Creek and spread south to Reeds Creek, burning over an area 20 miles long by 10 miles wide. When the fire reached the north bank of Reeds Creek fully 500 men lined themselves along the north bank and fought it with heroic persistence and conquered it. It is claimed the fire was set by parties for the purpose of burning out their neighbors. It is now reported that there are fires in two other parts of the county, one between the south and middle fork of Cottonwood and the other in the neighborhood of Lowery on Elden Creek. -- S.F. Chronicle, July 20

July 19. Will Woodward has been charged with causing the forest fires which have been raging here (Red Bluff) for several days. Very little change has taken place in the fire. The men have been able to keep it from passing Elder Creek.

-- S.F. Chronicle, July 20

#### 1897 - Alameda County

July 20. The Hearst ranch near Sunol came near being swept by flames on Saturday night, which were started by some campers.

-- S.F. Chronicle, July 21

1897 - Butte County

July 20. Forest fires have been raging for the past two days in the mountains east of Oroville and word reaches here that no less than four or five houses and barns have been burned.

A big fire started near Whitewash Trees and ran six or seven miles south to Palermo. Fifty men were engaged in fighting it.

Another fire broke out near Robinson mill (Butte Co.) and burned over a district 8 by 12 miles. Two hundred men were fighting it for two nights and days.

It is believed that parties have set these fires and more than one threatens to kill on sight the parties who caused the flames. A huge fire is raging between Hurlton and Enterprise and all the residents of the locality are now fighting it.

-- S.F. Chronicle, July 21.

July 21. Forest fires that have for several days past been raging in the foothills east and north of Chico have burned over thousands of acres of pasture land. The fires, however, caused little alarm until this afternoon when it was found that the flames were dangerously near the Sierra Lumber Co's flumes on Chico Creek. A large crew of men have been fighting hard all the afternoon. Another gang was sent out from Chico tonight. Should the flames reach the flume great damage will be done.

-- S.F. Chronicle, July 22

July 22. Forest fires are still raging north of Chico. Last night many miles of fencing was burned near Cohasset. Every able bodied man in Cohasset is out fighting the fire. Word has reached town that the Ten Mile House, a wayside inn, had been burned. It is now thought that the Sierra Lumber Co. flume can be saved, but the danger is not yet past. -- S.F. Chronicle, July 23

1897 - Shasta County

July 31. A forest fire broke out across the river three miles from Redding last night. The flames extended south and endangered a number of dwellings, but their course was arrested by backfiring and the flames are now going north where there is little property of value. -- S.F. Chronicle, August 1

August 10. A forest fire threatened destruction to several places located at the base of Mt. Baldy (Shasta Co.) this morning. The entire neighborhood was called out to fight the flames and save property. -- S.F. Chronicle, August 12

1897 - Tuolumne County

August 19. News comes of a terrible forest fire at Cloudman, Tuolumne County, which has caused great destruction of property. It is understood that the houses and buildings on the Crabtree ranch have been swept away by the flames without loss of life.

-- S.F. Chronicle, August 21

1897 - Calaveras County

August 19. During the heavy storm of Wednesday lightning struck a tree near Copperopolis, and running down the trunk of the tree struck the ground, igniting the grass and starting a field fire that swept the country from Copperopolis to Knights Ferry.

-- S.F. Chronicle, August 21

1897 - Fresno County

August 21. A fire has been raging in the mountains in the vicinity of Warthan, 25 miles east of Bradley for several days and all communication between Bradley and San Joaquin Valley by the road leading to Coalinga has been cut off. The ranchers are fighting the fires day and night with little effect as there is a dry hot wind blowing. -- S.F. Chronicle, August 22

1897 - Plumas County

August 21. A large forest fire some four miles in extent is reported in close proximity to the Plumas Imperial Mine. Reports state that much property is in danger. Much anxiety is demonstrated for it is feared that the flames may reach the many big flumes that conduct water to the Tributary hydraulic mine. As it is much valuable sugar pine lumber is being ruined.

-- S.F. Chronicle, August 22

1897 - Shasta County

August 22. George A. Fitch arrived last night from a short outing spent in the southeastern part of Shasta County. He stated that some unknown incendiaries maliciously set fire to the big timber interests of the famous Greenwood estate in the Shingletown country and near Lassen Butte. About 5,000 acres of the timber has been completely destroyed by the flames.

-- S.F. Chronicle, August 23

1897 - Napa County

August 22. On Friday a fierce forest fire broke out near here (Lidell, Napa Co.) and has been sweeping the country since. The Ellis and Lawley ranches were greatly damaged, nothing being

saved except the dwelling houses and a few immediate outhouses. A large force of men have been working to backfire the flames, but so far they have been unsuccessful. -- S.F. Chronicle, Aug. 23

1897 - San Luis Obispo County

August 23. The tracks of the Southern Pacific through the tunnels and over the Cuesta Grade of the Coast Range came near being destroyed by fire today. A fire has been in progress for three days in the mountains and early this morning swept down into the track and came near surging into the tunnels. Ties are burned in a number of places. Small ranches in the mountains have been devastated.

-- S.F. Chronicle, August 24

1897 - Los Angeles County

August 30. This afternoon great volumes of smoke from the hills back of Pasadena announced the beginning of another big fire such as that which last year devastated the mountains and did thousands of dollars worth of damage. Tonight the flames can be plainly seen from the western part of the city and appear to be spreading over the second range of hills. Men are out fighting the fire, but not much progress has been made in checking the flames.

-- S.F. Chronicle, August 31

1897 - Santa Cruz County

September 24. A destructive forest fire is raging near Glenwood and has spread over much territory. Much timber has been destroyed.

-- S.F. Chronicle, September 25

1897 - Napa County

October 6. A fierce fire is raging in the vicinity of Sage Canyon. Many valuable residences are in this section and it is feared they will be destroyed. -- S.F. Chronicle, Oct. 7

1898 - Napa County

March 31. A fierce fire has been burning for nearly a week only two miles from town (St. Helena). A great deal of timber has been destroyed and several dwellings are in danger. The fire is moving towards Sulphur Springs and should it reach that place nothing could be done to prevent the destruction of the buildings.

A smaller fire is burning on the mountains between here and Calistoga and threatens danger. -- S.F. Chronicle, April 1

1898 - Placer County

June 30. A field fire started near Rocklin, Placer County, this forenoon and driven by the fierce northern, the fire swept southward burning almost everything in its path. It reached the American River, jumped the river and swept over the hills clear to the Consummes River and how far eastward is not known. Houses, barns, fences, grain and hay fields, cordwood, etc., were wiped out, and it is said considerable live stock perished. Several persons are said to have been injured, but so far as known no lives were lost. From Rocklin to the Consummes River is more than 30 miles and it is not known how wide an area is swept over. The loss of property must be enormous. --- S.F. Chronicle, July 1

1898 - Marin County

June 30. A fire broke out in the hills east of Napa at 11:00 o'clock this morning and swept the country south to Tulcay Cemetery and as far as Juarez Creek. The barn of F.F. Willey was destroyed. --- S.F. Chronicle, July 1

1898 - Sacramento and Amador County

July 2. The fire near Michigan Bar started yesterday morning a few miles outside of the town and was caused by live coals of a deserted camp fire. The flames traveled with great rapidity and within a few hours came upon the citizens of Michigan Bar, who had gathered at Protrero Grove to celebrate the 4th of July. Back fires were started in a number of places and everything done to check the progress of the flames in the direction of the Grove, but this was only partially successful, for all the fences, barns and outbuildings of Protrero Bros. together with 500 cords of wood were destroyed. From the Grove the flames proceeded southward with a fury even greater than the approach. Sheep, horses and cattle, blinded by the great volumes of smoke, rushed headlong into the flames and perished. A large and valuable band of Angora goats became bewildered and not one of the number escaped. By sundown yesterday the burned area covered many thousands of acres of what had been timber or pasture land and the fire was still burning a dozen miles to the southeast in the direction of Plymouth. --- S.F. Chronicle, July 3

1898 - Placer County

July 2. Forest fires have been playing havoc in this locality (Auburn) the last few days. The greatest damage was at the Cash Rock Mine near Forest Hill where the loss is estimated at \$25,000. The town of Forest Hill barely escaped the flames. --- S.F. Chronicle, July 3

1898 - Sonoma County

July 16. A fierce fire has been raging in the hills back of Agua Caliente all day. The fire was started by hunters and it took many hours to get it under control. Much damage was done to pasturage, feed, timber and fencing. The flames swept hill and canyons down to the county road where it was brought under control.

-- S.F. Chronicle, July 17

1898 - Shasta County

July 30. Forest fires are raging in the vicinity of Bee Gum, and the whole Sacramento Valley is shrouded with smoke. These fires occur almost every year and are the results of efforts to clear the land for farming purposes. These fires soon become unmanageable with the result that thousands of dollars worth of valuable property in timber and feed are destroyed. During the last two days several thousand acres in area have been burned over.

-- S.F. Chronicle, July 31

1898 - Madera County

July 30. A disastrous forest fire is raging in the vicinity of Fine Gold, Madera County. Residents of the district are having difficulty in saving their homes. The people of the locality have banded together to fight the flames. The residence and outbuildings belonging to Benjamin Arnold were totally destroyed. From the difficult reports of yesterday and today the area swept by fire exceeds 100 square miles.

-- S.F. Chronicle, July 31

1898 - Lake County

July 30. Fierce forest fires have been raging in the vicinity of Highland Springs for several days, approaching dangerously near. A large body of men turned out to fight the destruction elements and it is now practically under control. The fire caused great trepidation among the guests at the hotel and many made preparations to flee to a place of safety.

-- S.F. Chronicle, July 31

1898 - Los Angeles County

July 31. A telephone message from Alpine Tavern on Mt. Lowe tonight says that the forest fires, which have raged there since the night before last are now under control. About 15 miles square have been burned over and beyond the damage to the timber there will be a great shortage in the water supply of the San Gabriel Valley.

-- S.F. Chronicle, August 1

1898 - Lake County

July 31. The forest fires in the vicinity (Highland Springs) have been extinguished and there is no further danger from them as

they were confined to the hills southwest of the springs.  
-- S.F. Chronicle, August 1

#### 1898 - Amador and San Joaquin Counties

July 31. Sometime Saturday morning fire started near Acampo on the Mokolumne River and was driven northeast through fields and timber for miles. It swept through a portion of Amador County, burning everything before it and is now burning in the foothills of Eldorado County, 12 miles southeast of Placerville. Within 36 hours that the fire has been burning it has covered a distance of 75 miles varying from 1 to 4 miles wide. The fire crossed Cosumnes River near Latrobe, Eldorado County and got into the greasewood and chaparral, which covers miles of land near Latrobe. Later in the day timber men from Placerville fought the flames. At present the loss is believed to be confined to fences, timber and cordwood. Much alarm is felt by farmers. -- S.F. Chronicle, August 1

#### 1898 - Tulare County

July and August. A fire set by sheep herders burned 20,000 acres of timberland on Marble Fork and North Fork of Kaweah River. This fire badly burned many of the big trees in the Sequoia National Park.

-- Ralph Hopping, 1912

#### 1898 - Marin County

August 12. A large grass fire was started near Fairfax last evening and is still raging through the redwoods in that direction. A residence and several hay barns have been destroyed. Many men are fighting the flames which have swept over a valuable piece of pasture and lumber land in Marin County. -- S.F. Chronicle, Aug. 13

#### 1898 - Santa Cruz County

August 12. Forest fires have destroyed 1,000 cords of wood near Boulder Creek, also a winery and fencing.

-- S.F. Chronicle, Aug. 13

#### 1898 - Sonoma County

August 13. A big forest fire is raging in the hills near Ocean Canyon about 25 miles from this city (Santa Rosa). Scores of people are fighting the fire. The flames have swept over a big area of country, destroying much timber, wood and fences.

-- S.F. Chronicle, Aug. 14

#### 1898 - Los Angeles County

August 19. The most serious mountain fire of the season burned for the last two days on San Gabriel Mts. north of Pasadena.

A gang of men have been sent to the fire, which is located in the heart of the range and on the north side. Nobody knows how the fire started, but it is very serious. -- S.F. Chronicle, Aug. 20

1898 - Mendocino County

August 19. Forest fires which have been devastating the redwoods for days past are under control and the weather in consequence is cooler. -- S.F. Chronicle, Aug. 20

1898 - Fresno County

August 26. A forest fire is raging near Millwood in the mountains. It is reported that the fire is spreading toward Big Trees in General Grant Park. The fire is beyond control.

-- S.F. Chronicle, Aug. 27

1898 - Santa Cruz County

Sept. 20. A forest fire is raging near Lomaprieta, Santa Cruz Co. Considerable cord wood has been destroyed.

-- S.F. Chronicle, Sept. 21

1898 - Mendocino County

Sept. 23. Forest fires are raging between Covelo and Westport, Mendocino County, and doing considerable damage. The destruction of telegraph and telephone poles and fencing is alarming. Farmers are vigorously fighting the fires.

-- S.F. Chronicle, Sept. 24

1898 - Glenn County

The watershed of Grindstone Creek on the California N.F. (now Mendocino) was burned over in 1898. -- R.W. Ayres, 1906

1898 - Madera County

A fire was set by unknown persons near North Fork to burn brush and burned about 3,000 acres of land. It was fought by about 30 people. -- A. Wofford

1898 - Los Angeles County

October 24. The mountain fires are now practically extinguished though it is still necessary to keep a force of men on duty owing to the danger of the smoldering embers fanned by the winds that prevail in the mountain canyons. The men worked for 36 hours without food or sleep and experienced great hardships. There are about 40 men on guard in the mountains for fear of the fire breaking out again. -- S.F. Chronicle, October 25

1898 - Shasta County

Fire covered same area as fire of 1872 on Pit River, Squaw Creek and McCloud River. Complete destruction over the area, especially on the higher slopes.

While we were in the mountains (about Mt. Shasta) from the middle of July until the end of September, one or more fires, the result of vandalism or neglect, were raging continuously on the south and west slopes, and two of them did irreparable injury. One began near some woodcutters' shanties, 3 or 4 miles below Wagon Camp, on the road to Sisson; the other and more destructive originated in the area covered by the lumbering operations from McCloud Mill and pushed swiftly up the Panther Creek slope, consuming the greater part of the only area of Pinus attenuata on Shasta and burning great tongues into the handsome fir forest on both sides of Wagon Camp, which is closely and almost completely surrounded. The fire that lasted longest in the summer of 1898 did the least harm. It consumed a worthless tract of manzanita chaparral between Black Butte and the mountain, and gave off a surprisingly enormous quantity of smoke, hiding the country to the west for a full month. During its continuance the entire mountain was often enveloped in smoke and when the wind was northwest, as it was a great deal of the time, showers of burned leaves fell daily at our camps. On August 2, when we were at work on the rocky slopes above the head of Squaw Creek at an altitude of 9,500 feet, charred leaves fell so abundantly that we caught many in our hands. Great clouds of smoke rolled up between us and the sun, which became deep red like the full moon and then disappeared. At 5 o'clock the smoke began to settle back, as it always did when the chill of the evening came on, and the sun reappeared, to set as usual behind the dark outlines of the distant mountains. Fires on the south, in the valley of the McCloud, cut off the view in that direction, and it was only at rare intervals, and usually at sunset, that we were able to see the snowy crown of Lassen Butte 60 miles away. Even Castle Crags, almost at our feet, were rarely visible. This experience is frequent in the west; and of the hundreds of persons who visit the Pacific slope every summer to see the mountains, few see more than the immediate foreground and a haze of smoke which even the strongest glass is unable to penetrate. Along the railroad between the head of Sacramento Canyon and Shasta Valley one traverses desolate tracts which a few years ago were covered by a noble forest of ponderosa and sugar pines.

-- C. Hart Merriam, Chief of Division of  
Biological Survey, in North American  
Fauna No. 16.

1899 - Santa Cruz County

Sept. 20. A forest fire is raging near Lomaprieta, Santa Cruz County. Considerable cordwood has been destroyed.

-- S.F. Chronicle, Sept. 21

1899 - Mendocino County

Sept. 23. Forest fires are raging between Covelo and Westport and doing considerable damage. The destruction of telegraph and telephone poles and fencing is alarming. Farmers are vigorously fighting the flames. -- S.F. Chronicle, Sept. 24

1899 - Los Angeles County

Sept. 23. Another disastrous forest fire started this afternoon 20 miles east of Pasadena, Los Angeles County, near Glendora. Dense clouds of smoke are plainly visible. The Forest Ranger arrived today with men to fight the flames, which are now destroying Dalton Canyon, the valuable watershed of the San Gabriel Valley. The Forest Supervisor left this evening to superintend the fight against the flames. It is feared the fire will kill the rainbow trout that were recently placed in the mountain streams.

-- S.F. Chronicle, Sept. 24

1899 - Marin County

Sept. 26. Residents on the north slope of Mt. Tamalpais were alarmed by clouds of smoke issuing from Williams Canyon. An investigation proved that the woods were on fire. Men were sent in every direction to summon assistance and after securing a good working force the men surrounded the burning area and felled trees to check the flames. Two suppositions are made as to its origin. One was that it was done by an insane man with a lighted pine torch, setting fire to the leaves.... -- S.F. Chronicle

1899 - Santa Cruz County

Sept. 26. A man and family narrowly escaped death in a forest fire in the Santa Cruz Mts. a week ago. They left San Francisco to pass a vacation at their mountain home 20 miles north of Santa Cruz. Several days after their arrival they noticed that the forest fires were blazing a few miles from their place. No one anticipated any danger until they were awakened by a dense smoke in the cottage. Looking out of the window they saw a wall of flame creeping up the side of the mountain toward the house. They became alarmed .... donned garments. Fire had come within 100 yards of cottage and had cut them off from the road ... They fled for their lives and were overcome by the heat.

-- S.F. Chronicle, Sept. 27

### 1899 - Santa Cruz County

Oct. 7. A dense volume of smoke can be seen from Santa Cruz today caused by forest fires 4 miles from Ben Lomond. It has swept over several places.

Four miles from Boulder Creek another fire has burned several cords of wood.

A fire on the headwaters of Pescadero Creek is reported to have destroyed a sawmill.

Men are fighting fire on Two Bar Creek, but the fire got beyond their control. -- S.F. Chronicle, Oct. 8

### 1899 - Santa Barbara County

Oct. 7. A mountain fire is raging in the Santa Ynez range 10 miles back of Santa Barbara. The Los Olivos and Santa Barbara stage was late this evening and reports a great deal of difficulty in getting by the fire. Many thousands of acres of mountain pasture have been destroyed.... -- S.F. Chronicle, Oct. 8

### 1899 - Siskiyou County

About 640 acres of forest land were burned over on the west side of Eddy Gulch. Caused by a house burning down. -- Robt. Finley

About 3,000 acres of young growth under 10 years of age were destroyed in a fire set by prospectors near Happy Camp. -- C. Gordon

### 1899 - Tuolumne County

A fire occurred at Cow Creek on the Stanislaus in the vicinity of Cow Creek Station. This was a hot crown fire and it completely destroyed matured trees. Forest was very dense. Extent was 1/4 mile wide and several miles in length. It skipped areas of various sizes.

### 1901 - Trinity County

In R. T. Fisher's report of September 1901 on the proposed Trinity Forest Reserve he mentions fire conditions in the South Fork Mountain area.

"Fire. The entire tract has been much burned. In the dense Fir Type along South Fork Mountain there are a score or more of fire glades, 50 to 100 acres in extent. In the opener Pine fire has seldom cleared the ground, but has scarred or burned down many trees, killed the

reproduction, and brought in brush. In the Scrub, fires have burned large areas. Six fires were seen during this reconnaissance, three of which had been set to clear trails, and the rest left by campers."

#### 1902 - Nevada & Placer Counties

The belief is generally held that the sheep herders fired the country in all directions and have been responsible for most of the fires of recent years. However that may be, all the fires observed during the last summer closely followed the sheep camps.

-- pp. 40-41, U.S.G.S. Professional Paper #8

#### 1902 - Nevada County

The origin of the older fires is involved in more or less doubt. Probably prospectors and miners are responsible for many; not unlikely sheepmen burned the forest in the early days of their occupancy, just as they now do, only on a larger scale. Fires observed last summer eating into the very heavy stands of Shasta fir in the region of Pinoli and Findley peaks had, in every instance, a sheep camp for their center. -- p. 117, U.S.G.S. Professional

Paper No. 8

#### 1902 - Los Angeles County

Concerning the results of fire on the water supply, Mr. I. W. Lord, of Lordsville, Los Angeles County, California, in speaking of the fire in Stoddard Canyon on the San Gabriel Reserve, says:

"Sometime previous to the fire 9 inches of water had fallen in 40 hours with no harmful results, after the fire one and one-half inches falling in 24 hours cut great gullies. And during a season of somewhat slack rainfall huge cuts 10 feet deep and 30 feet wide were washed out in some of the orchards below the canyon, men and teams being constantly required to stop the destruction. At the same time the usual water supply of 60 miner's inches from the canyon was reduced to 20."

-- From the Boundary files of 1902

#### 1902 - San Diego County

The method of burning brush for grazing, generally given me by the cattle men in San Diego County is as follows:

After burning over, the range is improved for two years, it then deteriorates for two years more when it is abandoned for from three to five years in this region, to let the brush form a

cover and the grass grow again, when it is reburned. This gives a rotation of from seven to ten years in this region; usually it is more.

There men say that burning kills out a good portion of the bunch grass, but makes the remainder much more accessible to the cattle and better liked by them. They also say that the process eventually destroys the range, as has been done in many parts of this region. -- From the Boundary files of 1902

#### 1902 - Nevada & Eldorado Counties

In a report of October 31, 1902, on the proposed Tahoe Forest Reserve, Charles H. Shinn makes the following statement relative to fires:

"Items about the frequency of fires occur from time to time in my township notes. Fires have evidently taken place much more often and have been more severe on the California side than in Nevada. The proportionate area which shows injury from fire in California as compared with Nevada is as five to one. The Nevada fires seldom do much harm to the soil; in California, on account of the more wasteful lumbering that has prevailed, nearly every fire destroys the humus and hardens the clay. Small and smouldering fires of many weeks duration are found with startling frequency along the roads and trails on the California side, often from four to ten in one day's travel. On the Nevada side only two or three such fires were found."

#### 1902 - Placer County

"The second growth is being cut for firewood, the trees being from four to twelve inches in diameter. In many cases it is being burned off in the hope of making more pasture. One fire this season near Dutch Flat ran over an area of ten square miles. Many lesser fires have occurred in these townships this year, destroying from five to a hundred acres each."

-- Report of Oct. 31 by Charles H. Shinn

#### 1904 - Siskiyou and Shasta Counties

The following extract is from Forest Assistant Elers Koch's report of 1904 on the Proposed Mt. Shasta Forest Reserve:

"Traces of fire are seen almost everywhere. It would be difficult to find a square mile of timberland

in the region which has not been burned over at some time. It rarely happens that large bodies of timber are entirely destroyed by fire. The entire area thus destroyed is estimated at only eleven square miles. Most of this is in the upper timber belt.

"During the summer, when this examination was made, fires were burning almost everywhere. During the month of August a thick pall of smoke hung over the whole country. A large majority of these were brush fires. During the dry season even the green chaparral burns freely. In the absence of fire lines to work from, it is almost impossible to extinguish such fires. They burn until they go out for lack of material to burn or are extinguished by rain."

-- pp. 41-42

"The causes of fire are many: Railroads, and especially logging railroads, are responsible for a large proportion of the fires. Camp fires, smokers, clearing land, etc., are frequently the origin of fires. Undoubtedly sheep and cattle men set out fires to improve the grazing and open up dense brush fields impenetrable to their stock. In one case a large fire near De La Mar was started by goat herders to burn a bear out of a canyon. The fire burnt over many square miles, destroyed a large quantity of cut and piled cordwood, and seriously threatened the town of De La Mar.

"Another case was reported from near Round Mountain where cattlemen started a fire to drive out a band of goats.

"The general feeling among settlers is against starting fires, more on account of the danger to their homes and fences than the damage to the timber."

-- P. 43

#### 1905 - Eldorado County

In a letter of October 22, 1905, from Ranger in Charge S.L.N. Ellis to the Forester, recommending the addition of Townships 9 and 10 North, Ranges 16, 17 and 18 East to the Forest, he says:

"From the summit of Pyramid Peak, on August 31 last, Deputy Forest Ranger Raymond Tyler and I counted seven fires burning in this section. The entire region is grazed so intensely that there will be no feed there

in a short time unless this land is placed under Forest Management. For the past several years, I am told, this region has been crowded with sheep and many fires have been burning 'all summer'."

1905 - Colusa, Glenn and Lake Counties

The following extract is taken from a letter dated September 13, 1906, from C. W. Tuttle of Colusa to the Secretary of the Interior, and relates to lands now within the Mendocino National Forest:

"Inasmuch as there is a strong and organized effort being made by the Stockmens Association, to have the proposed Stony Creek Reserve set aside, I take the liberty of writing you and presenting some reasons why this reserve should be maintained as recommended by the Department of Forestry.

"The lands included in Glenn, Colusa and Lake Counties, I am well acquainted with, as I have been hunting and fishing over them every season for the past twelve years, and have had a chance to notice the changes that have taken place since my first trip there, and the conditions as they exist today; the lands in Mendocino and Tehama counties I have never visited, so what I write, applies only to the water sheds of Stony Creek, and the lands in Glenn, Colusa and Lake.

"Snow mountain, 8000 feet, the highest peak in the Coast range, and Mt. St. John, are included in this Reserve, and Stony Creek, one of the largest tributaries of the Sacramento River has this as its water shed.

"When I first went to the top of Snow Mountain, the summit was covered with a thick growth of pea vines and cherry thickets, today it is devoid of vegetation, and as dry and dusty as a desert, due to fires and the pasturage of sheep and goats; acres and acres of fine timber have been destroyed by fires, and a large acreage covered with young pine trees, have been burned over; a few of these fires may have been due to the carelessness of campers, but the majority of them are set by sheep and goat men, in order to make feed for the next year; these fires usually occurring at a time of the year when the sheep and goats are being taken out from the ranges.

"Late last fall when I was deer hunting on the north side of St. John, sheep and goats were being driven from the mountains, and a trail of fires were left behind them, and the same conditions that exist on top of these mountains, and the head waters of the Stony Creek, exist to a great extent on the Eel river slope; there vast acres that used to be timbered, are now dry and dusty, devoid of vegetation, and the conditions growing worse every year."

Early Day Fires in the Nevada and Oregon Country  
Adjacent to California.

1860 - Mark Twain's fire at Lake Tahoe

Shortly after Mark Twain came west, he and his partner located a 300 acre timber claim on the east shore of Lake Tahoe in Nevada and proceeded to camp out for awhile.

However, Mark was just as careless with his camp fire as is the average "tenderfoot" of today, so his timber went up in smoke.

In "Roughing It", Mark tells how it happened:

"While Johnny was carrying the main bulk of the provisions up to our 'house' for future use, I took the loaf of bread, some slices of bacon, and the coffee-pot, ashore, set them down by a tree, lit a fire, and went back to the boat to get the frying-pan. While I was at this, I heard a shout from Johnny, and looking up I saw that my fire was galloping all over the premises!

"Johnny was on the other side of it. He had to run through the flames to get to the lake shore, and then we stood helpless and watched the devastation.

"The ground was deeply carpeted with dry pine-needles, and the fire touched them off as if they were gunpowder. It was wonderful to see with what fierce speed the tall sheet of flame traveled! My coffee-pot was gone, and everything with it. In a minute and a half the fire seized upon a dense growth of dry manzanita chapparel six or eight feet high, and then the roaring and popping and crackling was something terrific. We were driven to the boat by the intense heat, and there we remained, spell-bound.

"Within half an hour all before us was a tossing, blinding tempest of flame! It went surging up adjacent ridges -- surmounted them and disappeared in the canyons beyond -- burst into view upon higher and farther ridges, presently -- shed a grander illumination abroad, and dove again -- flamed out again, directly, higher and still higher up the mountain-side -- threw out skirmishing parties of fire here and there, and sent them trailing their crimson spirals away among remote ramparts and ribs and gorges, till as far as the eye could reach the lofty mountain-fronts were webbed as it were with a tangled

network of red lava streams. Away across the water the crags and domes were lit with a ruddy glare, and the firmament above was a reflected hell!

"Every feature of the spectacle was repeated in the glowing mirror of the lake! Both pictures were sublime, both were beautiful; but that in the lake had a bewildering richness about it that enchanted the eye and held it with the stronger fascination.

"We sat absorbed and motionless through four long hours. We never thought of supper, and never felt fatigue. But at eleven o'clock the conflagration had traveled beyond our range of vision, and then darkness stole down upon the landscape again.

"Hunger asserted itself now, but there was nothing to eat. The provisions were all cooked, no doubt, but we did not go to see. We were homeless wanderers again, without any property. Our fence was gone, our house burned down; no insurance. Our pine forest was well scorched, the dead trees all burned up, and our broad acres of manzanita swept away."

Please note that there was manzanita brush there in those days just as there is today.

#### Some Early Day Oregon Records

##### 1800 - Oregon

"A Mr. F. M. Wilkins, of Eugene, Oregon, born near Oregon City, made when a boy of fifteen, fifty-five years ago, a trip to Yaquina Bay and Seal Rock, at which time the whitened snags left from an old fire, were still standing. At Seal Rock there was an encampment of Indians. Mr. Wilkins' father and some other men in the party questioned the older Indians with regard to the fire which had left such an expanse of country barren of timber. Some of the older Indians were alive at the time of the fire and stated that it occurred about sixty-five or seventy years before, or about one hundred twenty years ago now, that it had burned an area roughly fifty to sixty miles long and twenty to thirty miles wide; that the heat was so intense that Indians and animals -- every living thing that could make its escape -- were

driven into the ocean and had to remain there two or three days and even then a breeze from the ocean was all that saved them from perishing. Yet we are told that the Indians practised successfully the system of light burning to prevent serious conflagrations!"

-- From "Six-Twenty-Six"

#### 1841 to 1850 - Clatsop County

Forest fires have been common on this coast since 1841. One occurred on the 1st of September of that year, and every year there have been more or less fires, started by Indians and camping parties, and in early times purposely set to clear land. No means are employed to stop these fires except in some instances back-firing, which has only been practiced in recent years. The most extensive fires that have happened, extended along the north bank of the Columbia River, below the Cascade Mountains, and from 8 to 10 miles wide. The year is not certainly remembered, but I think it was in September 1850. I well recollect the grandeur of the illumination, as seen in passing up and down the river, in the dense smoke at the time. For a distance of 50 miles or more, the forests were overrun and many millions of dollars worth of timber were burned, that lay convenient for shipping, and of size best for handling and working into lumber. There should be a law imposing as a penalty, imprisonment at hard labor for a term of years, for setting these fires. Fines would not reach them, as the people who set them have generally no property, or at most nothing but a cabin that may have cost three days' labor. He sets fires to burn what is called a "slashing", that is, timber and brush fell in any way that happens, and allowed to lay from three to six months, until a dry time, when it is set on fire as it lays all over the ground, without any regard to other timber, or the rights of others, or their improvements. These slashing fires are set every year, and from ten to a hundred thousand acres are burned over yearly.

-- W. H. Gray, Olney, Oregon

#### 1847 - Clackamus

More "Piute" Forestry.

In "Report Upon Forestry" by F. B. Hough in 1882, which is a report on his studies in the West made to the United States Department of Agriculture, I find the following account by William Phillips, a pioneer of Clackamus, Oregon:

"When I came to this country in 1846 it was almost perfect in all its wildness. With a few exceptions, not a tree or a shrub had been touched by the hand of man. Thousands of wild Indians roved over the prairies or hunted game in the almost impenetrable forests. No

fires had run in these forests for hundreds of years, the Indians being careful not to let fire get out, lest the grass should be burned from their horses, of which they had thousands, or lest the game should be driven from the forest in their section of the country. Large trees, 3 or 4 feet in diameter, stood in these forests, with the accumulated debris of hundreds of years lying thick around their base, with not a sign of fire about them. But early in the summer of 1847, when the immigrants, who had set out to seek homesteads for themselves began to arrive, fires got started in the forests, and the summer being dry they burned through the whole summer. Millions of acres of as fine forest timber as can be found on earth today were burned over and killed. Whole forests of red and yellow fir, of the giant arbor-vitae, and of hemlock and tamarack were destroyed by these raging fires. The smoke was so thick that we could scarcely see the sun at midday, and people complained of sore eyes and oppressed breathing. The ashes carried by the winds became a nuisance in and about our houses. But at length the fall rains came, put out the fires and drove away the smoke, so that the people could breathe freely again, and get a view of the country, and of the ruins of the forests which had been her greatest boast. A million of dollars would not repair the damages done by fire during that season."

#### 1880 - Columbia County

Fires appeared about the middle of July and lasted about six weeks. They originated in the burning of slashings, and were purposely set to clear them off. Hundreds, if not thousands of acres in this County were burned over, and this remark will apply to the greater part of Western Oregon. Much valuable timber, especially cedar and yellow fir were burned. This is a heavily timbered country, consisting in part of cedar, yellow and white fir, hemlock, maple and ash, as fine a body of timber as on this coast, or in the world. Except on the Columbia River, or other water courses, where it can be marketed, it has no value, and we burn it up to get rid of it for farming purposes.

-- H. A. Guild, Vernonio, Oregon

#### 1880 - Douglas County

There are large districts in this County where the forests have been consumed by fire in former years, embracing many thousand acres of once valuable timber land, but there are no data for reporting facts with accuracy, as the County is very large, extending 150 miles from east to west, and 90 miles from north to south. The burned districts are mostly unsurveyed, and no records are

obtainable by which one could get anything reliable, either in regard to the number of acres burned, or the value thereof; but I have no doubt, if the actual damage could be ascertained, it would run up into the millions. I am glad to see the department take hold of this matter. There are hundreds of fires started in the forests on this coast, for the purpose of destroying the timber, so as to make stock range, whereas, in a few years the timber would be of a great deal more value than all the stock which these ranges can ever support. There is a class of people on this coast that are desirous of obtaining everything for themselves. They appear to have no thoughts as to what future generations are to do for the want of that which is now needlessly destroyed. As to limiting the spread of fires on this coast, I think it is impossible, after they once get started, as the timber is so full of resin that it burns like a dry tar barrel. A great many of our forest trees, if a match is ignited at the foot, will take fire and the flame will run up from 100 to 200 feet in a few seconds, and if there is a wind, as there generally is, the fire spreads very rapidly.

-- Thomas Smith, Wilbur, Oregon

#### 1880 - Lane County

Fires occurred about midsummer, and lasted till the rains came. They were probably started from camp fires, and from the clearing of land, and when once under way, little can be done. They are usually of not great extent, but there was damage done to timber, forest products, and other property to a considerable extent. These fires occur every summer, and it seems impossible to prevent them. They are always the result of carelessness rather than of recklessness, and quite often they are started by fires kindled by emigrants and others, and left burning when they go away. The smoke of these fires is so dense that in some years - at least twice within the last twelve - we have been obliged to light lamps in the day time.

-- H. Elsworth, Eugene City, Oregon

#### 1880 - Multnomah County

There have been extensive fires during the last year, which began in August and lasted about four weeks. They were set by careless men, and continued until extinguished by the rain. A large area was burned over in this and other Counties, and a great deal of damage was done to standing timber. There can scarcely be any means devised for preventing these fires, as a great deal of brush is slashed every summer, and the wind scatters the fires in every direction.

-- G.H. Zimmerman, Portland, Oregon

#### 1880 - Yam Hill County

More or less of forest fires occur in the coast mountains every year, usually beginning about the 1st of August, and continuing two or three weeks. They are started by persons passing

to and fro, and from camp fires and carelessness. When a fire once gets started in the mountains it is useless to try to put it out, as well as very dangerous. They will burn until they go out of themselves, or until they are extinguished by the rain, and frequently run ten or twenty miles, killing the green timbers, and burning up all that is dead and dry. Tillamook County is subject to these fires almost every year. They have very severe fires down on the sound and along the Columbia River, these parts being a very heavily timbered country. From the absence of statistics the extent and damage of these fires cannot be given, but in some years they are very heavy and destructive. Within the year past standing timber to the value of \$5,000 must have been burned in this country and in Tillamook. Down on the Columbia River there was much injury done to farms lying adjacent to the timber. The heaviest fires occur over in Washington Territory, and the smoke blown from thence southward, in the summer season, darken the sun, so that sometimes it is necessary to light candles to see at dinner.

1880 - Clackamus County

Fires occurred in September, 1880, from causes unknown, but probably from the carelessness of hunters, and burned until they were extinguished by rains. -- Oswego Precinct, Oregon